```
Copyright
GenCore version (c) 1993 - 2002
 5.1.3
Compugen Ltd.
```

Title: Perfect score: Run Sequence: OM nucleic - nucleic search, using sw model on: US-09-893-371-3 3661 December ggagcgggggcgccgggtccg.....ccacctgcaccttttagcca 9, 2002, 11:27:05; Search time 6232 Seconds (without alignments)
17096.497 Million cell updates/sec 3661

Searched: 2054640 segs, 14551402878 residues Gapop 10.0 , Gapext 1.0

Scoring table:

IDENTITY_NUC

Total number of hits satisfying chosen parameters:

4109280

Minimum Maximum DB DB seq length: 0 length: 2000000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

Database 3: 5:: 5:: 7:: 7:: 10:: 114:: 115:: 116:: 116:: 117:: GenEmbl: * gb_ba:* gb_ro:*
gb_sts:* gb_in:* gb_pat:* gb_ov:* *: mo_dg gb_vi:* gb_un:* gb_sy:*

em_htg_mam:*
em_htg_vrt:*
em_sy:* em_htgo_hum:*
em_htgo_mus:*
em_htgo_other:* em_un:*
em_vi:*
em_htg_hum:* em_p1:* em_ro:* em_htg_other: * em_htg_inv:* em_sts:* em_ph:* em_pat:* em_ov:* em_htg_rod:* em_htg_pln:* em_htg_mus:*

em_mu:*
em_om:*

em_or:*

em_in:*

em_fun:*
em_hum:*

em_ba:*

Pred. No. is the number of results predicted by chance to have Ω

score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

	0		o o	Result
444 442 443 443	333333333333333333333333333333333333333	110 117 118 119 119 120 121 121 121 121 121 121 121 121 121	1110 1110 1111 1111 1111 1111 1111 111	No.
460.8 460.8 458.4 458.4 435.6 432.8	517 507.4 501 476.4 474.8 471.6 469 469 462.4	749.4 584.8 584.8 576.6 575.8 551 551 541.8 541.8	3649 3542.6 3037.8 3097.8 3097.2 2626.2 2595.2 2517.6 2417.6 11632.4 11632.6 919.6 919.6 749.4	Score
12. 12. 12. 12. 11. 11. 68	44.000.000.000.000	44.888.11 3.3888.11		Query Match
3617 3617 5347 3718 3561 1086 3050 3777	3630 4194 3886 4315 1900 1900 3762 192364 192364 199345 199345	300412 2529 2726 3480 3779 3174 3114 3126 3132 3549 3549 3590	3663 5227 3810 3110 3184 3505 3148 3288 3288 3288 3288 3288 3288 3452 3452 3452 3	Length
10 3 3 4 9	10 22 20 3 3 10	ε 1000000000000000000000000000000000000	10 10 10 10 10 10 10 10	DB
AX394541 HSA310570 AK092877 GGBBMIBA AF051353 DRONEWMYO HSM803609 MMMYOSINI	MMMIHCL MUSMYOSIX DMU07595 AY075567 AF380933 AF380933 RNMYR4 AL063094 AC084102 BC028071 BC1591440	RNU25148 AF0025148 AF002960 GDU04049 BOVMYHC GGBBMI AVBBMI AF002961 AF10726 AF105424 RNMYR1A	AY007255 BC021481 RNMYR2 MMU96723 HSMY01B BTU03420 BTMY01BA MMMIB RCU14382 RCU14549 AY069044 DMU07596 AC012834 AC011007596 AC012834 AC0110007596	ID
AX394541 Sequence AX310570 Homo sapi AK092877 Homo sapi X70400 G.gallus mR AF051353 Acanthamo L13070 Drosophila AL832302 Homo sapi X97650 M.musculus	0 20 433	4 00 B 0 C 1 0 4	r aax.o.xx+5	Description

ALIGNMENTS

RESULT 1
AYOU7255
LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM REFERENCE AUTHORS Mus musculus.

Mus musculus

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.

1 (bases 1 to 3663)

1 (bases 1 to 3663)

Pestic-Dragovich, L., Stojiljkovic, L., Philimonenko, A.A., Nowak, G., Ke, Y., Settlage, R.E., Shabanowitz, J., Hunt, D.F., Hozak, P. and de 3663 bp mRNA linear RO
Mus musculus nuclear myosin I beta mRNA, complete cds.
AY007255
AY007255.1 GI:11067001 ROD 01-NOV-2000 Nowak,G.,
o. and de

FEATURES

source

CDS

JOURNAL

Stoj

(bases 1 iljkovic, L.

to 3663)

press

TITLE JOURNAL REFERENCE AUTHORS TITLE

A Myosin I Isoform in the Nucleus Science (2000) In press

```
421 GAGACTGCTCCAGTTCTATGCAGAGACCTGCCCAGCCCCTGAACGGGGTGGCGCAGTGCG 480
                                                                                                        301 AGTACCACCTCATTTGTTTGCAGTGGCTGACACTGTATACCGGGCACTTCGTACTGAGCG 360
                                                                                                                                                                                      301 AGTACCACCTCATTTGTTTTGCAGTGGCTGACACTGTATACCGGGCACTTCGTACTGAGCG
                                                                                                                                                                                                                             241 AGACCTACAGATCTACAGCCGGCAGCATATGGAACGCTACCGTGGTGTCAGTTTCTATGA 300
                                                                                                                                                                                                                                             241 AGACCTACAGATCTACAGCCGGCAGCATATGGAACGCTACCGTGGTGTCAGTTTCTATGA 300
                                                                                                                                                                                                                                                                                       121 TeTecrecrecaeadartricaecaetgaegerecetreatteaeadaectecegegegett 180
                                                                                                                                                                                                                                                                                                                                                              121 TGTCCTGCTGGAGAATTTCACCAGTGAGGGTGCCTTCATTGAGAACCTCCGGCGGCGGTT 180
                                                                                                                                                                                                                                                                                                                                                                                                                         61 GGTTCGAGTGACCATGGAGAGCGCCTTGACTGCCCGAGACCGGGTAGGGGTGCAGGACTT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 GGAGCGGGCGCCGGGTCCGGCAGGATGCGCTAQCGGGCATCGGCCCTGGGCAGTGACGG 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 GAGCGGGGCGCCGGGTCCGGCAGGATGGGCTAGCGGGCATCGGCCCTGGGCAGTGACGG
                                                                                                                                                                                                                                                                                                                                                                                                        GGTTCGAGTGACCATGGAGAGCGCCTTGACTGCCCGAGACCGGGTAGGGGTGCCAGGACTT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Submitted (18-AUG-2000) Physiology and Biophysics, University Illinois at Chicago, 835 S. Wolcott, Chicago, IL 60612, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TETLARRERENLI YTY LORUNG TO THE ALTON OUA THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              99.7%; Score 3649; DI
100.0%; Pred. No. 0;
Live 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /codon_start=1/product="nuclear myosin I beta"
/protein_id="AAG02570.1"
/db_xref="G1:11067002"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /dev_stage="17 day old embryo"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /organism="Mus musculus"
/db_xref="taxon:10090"
/chromosome="11"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            . DB 10; Length 3663;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            <u>,</u>
                                                                                                          DЬ
                                                                                                                                     Qγ
                                                                                                                                                                    DЬ
                                                                                                                                                                                               Qγ
                                                                                                                                                                                                                             Ъ
                                                                                                                                                                                                                                                        Qγ
                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                                Д
                                                                                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                                                                                            Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                     γQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δà
1501 GAAGTTGGAGGACACTGTGAAGCCCCACCCTCACTTCCTGACGCACAAGCTCGCTGACCA 1560
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Б
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     γQ
                                             1441 CTCCATCTTGGATGAAGAGTGCCTGCGTCCTGGGGAGGCCACGGACCTGACCTTTCTGGA 1500
                                                            1441 CTCCATCTTGGATGAAGAGTGCCTGGGTCCTGGGGAGGCCACGGACCTGACCTTTCTGGA 1500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Б
                                                                                                          1381 CCAGTACTTCAACAACAAGATCATCTGTGACCTGGTAGAGGAGAAGTTCAAGGGCATCAT
                                                                                                                        1381 CCAGTACTTCAACAACAACAAGATCATCTGTGACCTGGTAGAGGAGAAGTTCAAGGGCATCAT 1440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              γQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DЪ
                                                                                                                                                             1321 GCTGACTCTCAAGTCGGAGCAGGAGGAATACGAGGCTGAGGGCATCGCGTGGGAACCTGT 1380
                                                                                                                                                                                 1321 GCTGACTCTCAAGTCGGAGCAGGAGGAATACGAGGCCTGAGGGCATCGCGTGGGAACCTGT 1380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      γQ
                                                                                                                                                                                                                          1261 CAGCTTCGAGCAGTTCTGCCATCAACTACTGCAATGAGAAGCTGCAGCAGCTCTTCATCGA 1320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DЬ
                                                                                                                                                                                                                                           1261 CAGCTTCGAGCAGTTCTGCATCAACTACTGCAATGAGAAGCTGCAGCAGCTCTTCATCGA 1320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δÃ
                                                                                                                                                                                                                                                                                    1201 GCGAAGCACCACGGTTCTTGGGCTTCCTGGACATTTACGGCTTTGAAGTGTTTCAGCATAA 1260
                                                                                                                                                                                                                                                                                                    1201 GCGAAGCACCACGGTTCTTGGGCTCCTGGACATTTACGGCTTTGAAGTGTTTCAGCATAA 1260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Д
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                             1141 CTGGCTGGTCAGAAAGATCAATAGGTCACTGGCCTCTAAGGACGCTGAGAGCCCCAGCTG 1200
                                                                                                                                                                                                                                                                                                                                                              1141 CTGGCTGGTCAGAAAGATCAATAGGTCACTGGCCTCTAAGGACGCTGAGAGCCCCAGCTG 1200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                       1081 TGAACAGGCGGCATATGCAAGGGATGCGCTTTGCCAAGGCTGTGTACAGCCGGACATTCAC 1140
                                                                                                                                                                                                                                                                                                                                                                                                                      1081 TGAACAGGCGCATATGCAAAGGGATGCGCTTGCCAAGGCTGTGTACAGCCGGACATTCAC 1140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                1021 AGCCCTGACCCACAGGAAGATCATCGCCAAGGGGGAAGAGCTCCTGAGCCCACTGAACCT 1080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1021 AGCCCTGACCCACAGGAAGATCATCGCCAAGGGGGAAGAGCTCCTGAGCCCACTGAACCT 1080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Д
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      961 TGAGAACCAGGTCAAATATGTGAOCAGGCTCCTTGGTGTGGAAGGTACAACACTTAGGGA 1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   901 CCTACATCTGGGCAACATCCACTTTGCTGCTGACGAGGACAGCAATGCCCAGGTTACTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   901 CCTACATCTGGGCAACATCCACTTTGCTGCTGACGAGGACAGGAATGCCCAGGTTACTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          841 GTCCGTCATTGACTTCACTGAGGATGAAGTGGAGGACTTGCTCAGCATCGTGGCCAGCGT 900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           841 GTCCGTCATTGACTTCACTGAGGATGAAGTGGAGGACTTGCTCAGCATCGTGGCCAGCGT 900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 721 TCTCCGTCGGCTGGGCTTGGAACGGAACCCCCAGAGCTACTTGTACCTGGTGAAGGGCCA 780
721 TCTCCGTCGGCTGGGCTTGGAACGGAACCCCCAGAGCTACTTGTACCTGGTGAAGGGCCA 780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     601 CCCCGTGGGAGGCCACATTCTCAGTTACCTCCTGGAAAAGTCCCGGGGTGGTGCACCAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 601 CCCCGTGGGAGGCCACATTCTCAGTTACCTCCTGGAAAAGTCCCGGGGTGGTGCACCAAAA 660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         541 CAACGATAACTCCAGCCGGTTTGGAAAGTACATGGATGTGCAGTTTGACTTCAAGGGTGC 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          541 CAACGATAACTCCAGCCGGTTTGGAAAGTACATGGATGTGCAGTTTGACTTCAAGGGTGC 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 481 AGACCGCCTGTTGCAGAGCAÁCCCCGTGTTAGÁGGCCCTTTGGGAÁTGCCAAGÁCTCTCCG 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 481 AGACCGCCTGTTGCAGAGCAACCCCGTGTTAGACGCCTTTTGGGAATGCCAAGACTCTCCG 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              960
```

Ouery Match Best Local Sim! Matches 3660;

Similarity 100. 60; Conservative

BASE COUNT ORIGIN

865 a

S В Ş Д Ş Дb δ DЬ Ş Ъ ş дb

2640	81 GCAGCAAAAGGCGGTGGCTAGTGAAATTTTCAAGGGCAAGAAGGACAACTACCCCCAGAG	b 25	D
2639	80 GCAGCAAAAGGCGGTGGCTAGTGAAATTTTCAAGGGCAAGAAGGACAACTACCCCCCAGAG	у 25	γo
2580	21 CATGAAGAACATGGTGTGGAAGTACTGCCGGAGCATCAGCCCTGAGTGGAAGCAGCAGCT	b 25	D
2579	20 CATGAAGAACATGGTGTGGGAAGTACTGCCGGAGCATCAGCCCTGAGTGGAAGCAGCAGCT	у 25	νQ
2520	61 CTCCTGGCCCACACCCCCACCTGCCCTGAGAGAGGCCTCAGAACTGCTACGGGAACTGTG	N 1	B 5
4 0	UBUNDALIPLIALIPAN AND AND AND AND AND AND AND AND AND A		.
. A.	00 CGTGCGCGCCGCTTTTTTTGCTTAACCTGAGGCGGCAACTGCCCCGGAATGTTCTGGACAC	, N	, Q
2400	41 CCGTGGCTTCATTTTGCGCCATTCACCCCGGTGCCCTGAGAATGCCTTCTTTGGACCA	N	DЬ
2399	40 CCGTGGCTTCATTTTGCGCCATTCACCCCGGTGCCCTGAGAATGCCTTCTTCGTTGGACCA	у 23	Qy
2340	81 ACTGGGCCGGAGGAAGGCAGCCAAGAGGAAGTGGGCAGCCCAGACCATCCGTCGACTCAT	b 22	DЬ
2339	80 ACTGGGCCGGAGGAAGGCCAAGAGGGAAGTGGGCAGCCCAGACCATCCGTCGACTCAT	у 22	Оу
2280	21 ACAGAAATTTCTCCGGGTGAAGCGATCAGCCATCTGTATCCAGTCATGGTGGCGTGGCAC	b 22	b
2279	20 ACAGAAATTTCTCCGGGTGAAGCGATCAGCCATCTGTATCCAGTCATGGTGGCGTGGCAC	у 22	νo
2220	61 AGTCCGGCGGCAGAGTCTAGCCACCAAGATCCAGGCGGCCTGGAGGGGCTTTCATTGGCG	b 21	B 5
	V. CHRONDON CONTROL) t
15	OO CAGGACTAAGATCTTCATCCGATTCCCCAAGACCTTATTTGCCACAGAGGACTCCCTGGA	y 21	, 5 5
2100	41 GGATGGTGGCCGTGTTGGTCAGACACCTCGGCTACAAGCCAGAAGAGTACAAAATGGG	N	
2099	40 GGATGGTGTGGCCGTGTTGGTCAGACACCTCGGCTACAAGCCAGAAGAGAGTACAAAATGGG	у 20	Qy
2040	81 CCTGCAGAGGTACAAGTCACTGTGCCCAGAGACATGGCCCATGTGGGCAGGACGGCCCCA	b 19	D
2039	80 CCTGCAGAGGTACAAGTCACTGTGCCCAGAGACATGGCCCCATGTGGGCAGGACGGCCCCA	у 19	Qy
1980	21 GATGGAGAATCTGCGCGTGCGCAGAGCTGGCTTTGCCTATCGTCGCAAATATGAGGCTTT	· .	문 4
1	つり、「の事でないのは、までもつのののもののでは、これでは、これでは、これでは、これでは、これでは、これでは、これでは、これ		5
1919 1920	60 CAAGCAGCCGGGTCGCTTTGATGAGGTGCTCATCCGACATCAGGTGAAGTACCTGGGACT [у 18 b 18	da Vo
1860	01 CGTGGAGATCCTGAGGTCTAAGGAGCCTGCCTATATCCGGTGCATCAAGCCAAACGACGC	b 18	ם
1859	00 CGTGGAGATCCTGAGGTCTAAGGAGCCTGCCTATATCCGGTGCATCAAGCCAAACGACGC	у 18	γQ
1800	41 CAGTGACAAGAAGCGGCCAGAGACGGTGGCCACCCAGTTCAAGATGAGCCTCCTGCAGCT	b 17	
1799	41 CAGTGACAAGAAGCGGCCAG-GACGGTGGCCACCCAGTTCAAGATGAGCCTCCTGCAGCT	у 17	ρ
1740	81 GGAGACCATGTGCAGCTCAATGAACCCCATCATGGCCCAGTGCTTTGACAAGAGTGAGCT	b 16	· Db
1740	81 GGAGACCATGTGCAGCTCAATGAACCCCCATCATGGCCCCAGTGCTTTGACAAGAGTGAGCT	у 16	n
1680	21 GACCTACAGTGTGAGCTGGGTTTCTGGATAAAAACAATGACCTCCTCTTCCGGAAACCTGAA	b 16	D
1680	21 GACCTACAGTGTGACTGGGTTTCTGGATAAAAACAATGACCTCCTCTTCCGGAACCTGAA	у 16	Qy
1620	61 GAAGACCAGGAAATCCCTAGACCGAGGGGAGTTCCGCCTTCTGCATTATGCTGGAGAGGT	ъ 15	D
1620	61 GAAGACCAGGAAATCCCCTAGACCGAGGGGGAGTTCCGGCCTTCTGCATTATGCTGGAGAGGT	у 15	Ö
1560	01 GAAGTTGGAGGACACTGTCAAGCCCCACCCTCACTTCCTGACGCACAAGCTCGCTGACCA	b 15	0

	c 3661	3661	Db
	C 3660	3660	Qy
3660	TTCTTGGCCAACCCTTCCTTATTCCCTTGTCTGCCTGTCCATCCA	3601	Db
3659	TCTTGGCCAACCCTTCCTTATTCCCTTGTCTGCCTGTCCATCCA	3600	Qy
3600	GCCTCGAACAGGGCAAGGAATGTAACTGAAAGACTGGCTGG	3541	Db
3599	CCTCGAACAGGGCAAGGAATGTAACTGAAAGACTGACTGGGCTGGGCTGGAAGGTCCT	3540	Qy
3540	AAACTATTTTTTAAGAAAGCCATTTTCCTACCCTAAACACACTGGATGTGTTTTTCCCT	3481	Db
3539	AACTATTTTTTTAAGAAAGCCATTTTCCTACCCTAAACACACTGGATGTGTTTTTCC	3480	Qy
3480	TATCTAAGACAAGGGAATTTTAACTGAGGTTTTCTCTGAGATTTTTTGATGCTTTATAGG	3421	Db
3479	ATCTAAGACAAGGGAATTTTAACTGAGGTTTTTCTCTCTGAGATTTTTTTT	3420	Qy
3420	CCACACCAATAGAAAAGCAGAGGCCTGAGCCAGGCCAGG	3361	Db
3419	CACACCAATAGAAAAGCAGAGGCCTGAGCAGGCCAGGCC	3360	Qy
3360	TCGCCCCCTTTGAGGTGATCAGGAGCCAGGGAGCTACCCCATGAGTGGGCCAGGCCGGG	3301	DЪ
3359	CGCCCCTTTGAGGTGATCAGGAGCCAGGGAGCTACCCCATGAGTGGGCCAGGCCGG	3300	Qy
3300	CTTCCAAACAGGGATCCATGGACACCCTCAAAACCCCACGCTGCAAACTCCTGCCTTCTGC	3241	Db
3299	TTCCAAACAGGGATCCATGGACACCCTCAAAAACCCCACGCTGCAAACTCCTGCCTTTCTG	3240	Qy
3240	TCCTGACTCCTGATGCTTCCCTTAGTCCCCTCCTCCCTCC	3181	Db
3239	CCTGACTCCTGATGCTTCCCTTAGTCCCCTCCTCCCTCCGACTTACCAAAAACTCAA	3180	Qy
3180	GCTGTGGTGGCCC	3121	Db
3179	CACCTGGCTGTGGTGGCCCCACGGCTGAATTCTCGGTGATGAAGGCTGCGGTGGACCG	3120	Qy
	GGACGGCATCATTGACTTCACATCGGGCTCAGAGCTTCTCATCACCAAGGCTAAGAATGG	3061	Дb
3119	GACGGCATCATTGACTTCACATCGGGCTCAGAGCTTCTCATCACCAAGGCTAAGAATG	3060	Qy
3060	CCGCGTGAACAATATCAACCATCAACCAGGCAGCATAACGTTTGCAGGGGGTCCAGGCAG	3001	Дb
3059	CGCGTGAACAATATCAACATCAACCAGGGCAGCATAACGTTTGCAGGGGGTCCAGGC	3000	Qy
3000	TGTGGTGCTGCAGAGTGATCATGTGATCGAGACACTAACCAAGACGGCCCTCAGTGCTGA	2941	Db
2999	TGGTGCTGCAGAGTGATCATGTGATCGAGACACTAACCAAGACGGCCCTCAGTGCT	2940	Qy
2940	CCTGAGTGATAGCCTATTTGTGCTTCACGTGCAGCGTGAAGACAACAACCAGCAGGAGGAGA	2881	Db
2939	CTGAGTGATAGCCTATTTGTGCTTCACGTGCAGCGTGAAGACAACAAGCAGAAGGGA	2880	Qy
2880	GGATGCTAAAGTCAAGCAGAGAATTGATTATGCCAACCTAACCGGAATCTCTGTCAGTAG	2821	Db
2879	GATGCTAAAGTCAAGCAGAGAATTGATTATGCCAACCTAACCGGAATCTCTGTCAGT	2820	Qy
2820	GGGTTACAAGCCTCGCCCCCGGCAGCTGCTGCTCACGCCCAGTGCTGTGGTCATTGTGGA	2761	Db
2819	GGTTACAAGCCTCGCCCCCGGCAGCTGCTGCTCACGCCCAGTGCTGTGGTCATTGTGG	2760	Qy
2760	TCAATCCTTGGGCTCTGAACCCATCCAGTATGCCGGTGCCCGTGGTAAAATACGACCGTAA	2701	Db
2759	CAATCCTTGGGCTCTGAACCCATCCAGTATGCCGTGCCCGTGGTAAAATACGACCGTA	2700	Qy
2700	TGTCCCCAGACTCTTCATTAGCACACGGCTTGGCACAGAGGAGATCAGCCCCAGAGTGCT	2641	Db
2699	GTCCCCAGACTCTTCATTAGCACACGGCTTGGCACAGAGGAGATCAGCCCCAGAGTG	2640	Qy

```
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 2
BC021481
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                       K NIH.MGC Project URL: http://mgc.nci.nih.gov
Contact: MGC help desk
Email: cgapbs-remail.nih.gov
Tlssue Procurement: Jeffrey Green M.D.
CDNA Library Preparation: Life Technologies, Inc.
Sequencing by: National Institutes of Health Intramural
NA Sequencing Center (NISC),
Gaithersburg, Maryland;
Contact: nisc_mgc@nhgri.nih.gov
Akhter, M., Myele, K., Beckstrom-Sternberg, S.M., Benjamin, B.,
Akhter, M., Myele, K., Beckstrom-Sternberg, S.M., Benjamin, B.,
Hansen, N. Ho, S.-L., Karlins, E., Kwong, P., Laric, P.,
McDowell, J., Masiello, C., Masker, M., Mastrian, S.D., McCloskey, J.C.,
Yogt, J.L., Walker, M., S., Thomas, P.J., Touchman, J.W.,
Young, A., Zhang, L.-H. and Green, E.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM
                                                                                                                                                                                                                                                                                                                                          Clone distribution: MGC clone distribution information can be found series: IRNK Plate: 55 Row: C Column: 9
passed the following selection full length sequencing because it Location/Qualifiers

1. 5227
                    Direct Submitsion
Submitted (14-JAN-2002) National Institutes of Health, Mammalian Gene Collection (MGC), Cancer Genomics Office, National Cancer Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mus musculus
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalla; Eutherla; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BC021481
Mus musculus, myosin I
complete cds
BC021481
           TOFKMSLLQLVEILRSKEFAYIRCIKPNDAKQPGRFDEVLIRHQVKYLGLMENLRVRR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BC021481.1 GI:18204813
                                                                                                                                                                                                                     /codon_start=1
/product="myos
                                                                                                                                                                                                                                                Colone-"MCC:36155 IMAGE:5344331"

/tissue_type-"Mammary tumor. C3(1)-Tag model. Infiltrating / Colone_11b-"NCI_CGAP_Mam6"
/lab_host-"DH10B"
/note-"Vector: pCMY-SPORT6"
                                                                                                                                                                                                                                                                                                                                     /organism="Mus musculus"
/db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ic,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5227 bp mRNA linear ROD 07-AUG-2002 Clone MGC:36155 IMAGE:5344331, mRNA,
  DЬ
                        Š
                                                    В
                                                                           γQ
                                                                                                     В
                                                                                                                             Ş
                                                                                                                                                       Дb
                                                                                                                                                                             Qy
                                                                                                                                                                                                       DЪ
                                                                                                                                                                                                                              δĀ
                                                                                                                                                                                                                                                       DЬ
                                                                                                                                                                                                                                                                              20
                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                  Qy
                                                                                                                                                                                                                                                                                                                                                                                                             DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                    Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δĀ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ДЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Qγ
93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Д
                        88
                                                 87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     γQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ДĎ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ď
```

FEATURES

source

CDS

REMARK COMMENT

457 GCAAGACACAGGCCACCAAGAGACTGCTTCCTACAAGACTACTGCAGAGAGAG	PIPPPALREASELLIERCE, INTERPROPENAFFLDITOR, CANANA TOTOSWARGTICER VEHICLISTRUCTURE VEHICLISTRUCTURE VEHICLISTRUCTURE VEHICLISTRUCTURE VEHICLISTRUCTURE VEHICLISTRUCTURE VEHICLISTRUCTURE VEHICLISTRUCTURE SERVOJOGORANA SEIFKOKNOUPOKS ORIGIN BASE COUNT 1284 1372 1284 1372 1284 1372 1284 1372 1284 1372 1284 1372 1284 1372 1284 1372 1284 1372 1284 1372 1284 1372 1284 1372 1284 1372 1284 1372 1284 1372 1284 1372 1284 1372 1384 1372 1384 1372 1384 1387 1388 13	AGEAYRRKYBAFLORYKSLCPETWPWWAGRPODGVAVLVRHLGYKPEEYKWGR: RPPKTLFANEDSLEVRROSLATKIQAAWRGFHWROKFI, BVC. C. YKPEEYKWGR: KAAKRKWAAQTIRRI, TO. C. T.
	GTLGRR VLDTSW DNYPOS SSAVVI JNSR" 3;	RTKTFT

Qy	942	GCAATGCCCAGGTTACTACTGAGAACCAGCTCAAATATCTGACCAGGCTCCTTGGTGTGG 10	001
В	997	AATGCCCAGGTTACTACTGAGAACCAGCTCAAATATCTGACCAGGCTCCTTGGTGTGG 10	56
B 8	1002	AAGGTACAACACTTAGGGAAGCCCTGACCCACAGGAAGATCATCGCCAAGGGGGAAGAGC 10	16
Qy	1062	TGAGCCCACTGAACCTTGAACAGGCGGCGCATATGCAAGGGATGCGCTTGCCAAGGCTG 11	21
Db	1117	TCCTGAGCCCACTGAACCTTGAACAGGCGGCATATGCAAGGGATGCGCTTGCCAAGGCTG 11	76
Qy	1122	TGTACAGCCGGACATTCACCTGGCTGGCTCAGAAAGATCAATAGGTCACTGGCCTCTAAGG 11	81
Ф	1177	AGCCGGACATTCACCTGGCTGGTCAGAAAGATCAATAGGTCACTGGCCTC	36
B O	1182 1237	ACGCTGAGAGCCCCAGCTGGCGAAGCACCACGGTTCTTGGGCTCCTGGACATTTACGGCT 12	41 96
QΥ	K)	GTGTTTCAGCATAACAGCTTCGAGCAGTTCTGCATCAACTACTGCAATGAGAAGC 1	01
Дb			56
γQ	0	CAGCTCTTCATCGAGCTGACTCTCAAGTCGGAGCAGGAAGAATACGAGGCTGAGG 13	61
Ъ	1357	CAGCTCTTCATCGAGCTGACTCTCAAGTCGGAGCAGGAGGATACGAGGCTGAGG 14	16
Ş Q	1362	GCATCGCGTGGGAACCTGTCCAGTACTTCAACAACAAGATCATCTGTGACCTGGTAGAGG 14	21
Qγ	1422	GAAGTTCAAGGGCATCATCTCCATCTTGGATGAAGAGTGCCTGCGTCCTGGGGAGGCCA 14	81
В	47	CTCCATCTTGGATGAAGAGTGCCTGCGTCCTGGGGAGGCCA 15	36
Qy	48	CCACCCTCACTTCCTGA 1	41
Ъ		GGACCTGACCTTTCTGGAGAAGTTGGAGGACACTGTCAAGCCCCACCCTCACTTCCTG	96
Qy	1542	GAGGGGAGTTCCGCCTTC 1	
ф	59	CACAAGCTCGCTGACCAGAAGACCAGGAAATCTCTAGACCGA	56
Qy	1602	CATTATGCTGGAGAGGTGACCTACAGTGTGACTGGGTTTCTGGATAAAAACAATGACC 1	61
В	65	GCATTATGCTGGAGAGGTGACCTACAGTGTGACTGGGTTTCTG	16
Qy	1662	TCCTCTTCCGGAACCTGAAGGAGACCATGTGCAGGTCAATGAACCCCATCATGGCCCAGT 17	21
5	-	CCTCTTCCGGAACCTGAAGGAGCATGTGCAGCTCAATGAACCCCCATCATGGCCCAGT 1	
D Q	1722	GCTTTGACAAGAGTGAGCTCAGTGACAAGAAGCGGCCAG-GACGGTGGCCACCCAGTTCA 17	90
δ	7	GATGAGCCTCCTGCAGCTCGTGGAGATCCTGAGGTCTAAGGAGCCTGCCT	
Вb	1837	AGATGAGCCTCCTGCAGCTCGTGGAGATCCTGAGGTCTAAGGAGCCTGCCT	96
Ωу	1841	GCATCAAGCCAAACGACGCCAAGCAGCCGGGTCGCTTTGATGAGGTGCTCATCCGACATC 19	00
Db	1897	ATCAAGCCAAACGACGCCAAGCAGCCGGGTCGCTTTGATGAGGTGCTCATCCGACAT	56
Qy		9	60
Ъ	vo.	SAAGTACCTGGGACTGATGGAGAATCTGCGCGTGCGCAGAGCTGGCTTTGCCTATC 20	16
\$ 5	1961	GTCGCAAATATGAGGCTTTCCTGCAGAGGTACAAGTCACTGTGCCCAGAGACATGGCCCA 20	20
В	20	CAAATATGAGGCTTTCCTGCAGAGGTACAAGTCACTGTGCCCAGAGACATGGCCCA 2	76

3160	TCACCAAGGCTAAGAATGGCCACCTGGCTGTGGTGGCCCCCACGGCTGAATTCTCGGTGAT	3101	Qy
3156	TTGCAGGGGGTCCAGGCAGGGACGGCATCATTGACTTCACATCGGGCTCAGAGCTTCTCA	3097	DЬ
3100	TGCAGGGGGTCCAGGCAGGGACGGCATCATTGACTTCACATCGGGCTCAGAGCTTCTC	3041	Qy
3096	AC -	3037	Дb
3040	GACGGCCCTCAGTGCTGACCGGGGGAACAATATCAACATCAACCAGGGCAGCATAACG	2981	Qy
03		97	Db .
2980	CAACAAGCAGAAGGGAGATGTGGTGCTGCAGAGTGATCATGTGATCGAGACACTAA	2921	νΩ
97		91	рь
92	CGGAATCTCTGTCAGTAGCCTGAGTGATAGCCTATTTGTGCCTTCACGTGCAGCGTG	2861	Qy
2916	GTGCTGTGGTCATTGTGGAGGATGCTAAAGTCAAGCAGAAGTTGATTATGCCAACCTAA	2857	Db V
α	GGTAAAATACGACCGTAAGGGTTACAAGGCCTCGCCCCGGCAGCTGCTCACGCCC	9 4	
0.8	TGGTAAAATACGACCGTAAGGGTTACAAGCCTCGCCCCCGGCAGCTGCTGCTCACGCCCA	74	. Qy
2796	ATCAGCCCCAGAGTGCTTCAATCCTTGGGCTCTGAACCCATCCAGTATGCCGTGCCC	2737	Db
2740	AGATCAGCCCCAGAGTGCTTCAATCCTTGGGCTCTGAACCCATCCAGTATGCCGTGCCCG	2681	γQ
2736	AGGACACTACCCCCAGAGTGTCCCCAGACTCTTCATTAGCACACGGCTTGGCACAGAGG	2677	ДĎ
2680	GGACAACTACCCCCAGAGTGTCCCCCAGACTCTTCATTAGCACACGGCTTGGCACAGAG	2621	Qy
2676	CTGAGTGGAAGCAGCTGCAGCAAAAGGCGGTGGCTAGTGAAATTTTCAAGGGCAAGA	2617	_ Db
2620	TGAGTGGAAGCAGCTGCAGCAAAAGGCGGTGGCTAGTGAAATTTTCAAGGGCAA	2561	Qy
2616	ACTGCTACGGGAACTGTGCATGAAGAACATGGTGTGGAAGTACTGCCGGAGCATCAGCC	2557	Db
2560	ACTGCTACGGGAACTGTGCATGAAGAACATGGTGTGGAAGTACTGCCGGAGCATCAGC	2501	Qy
ū			Db
2500	CCGGAATGTTCTGGACACCTCCTGGCCCACACCCCCACCTGCCCTGAGAGAGGCCTC	2441	Qy
49		43	Db
2440	TGCCTTCTTCTTGGACCACGTGCGCGCCTCATTTTTGCTTAACCTGAGGCGGCAACT	2381	Qy
2436	AGACCATCCGTCGACTCATCCGTGGCTTCATTTTGCGCCCATTCACCCCGGTGCCCTGAGA	2377	Db
2380	ACCATCCGTCGACTCATCCGTGGCTTCATTTTGCGCCATTCACCCCGGTGCCCTGAG	2321	Qy
37		3	рb
2320	TCATGGTGGCGTGGCACACTGGGCCGGAGGAAGGCAGCCAAGAGGAAGTGGGCAGC	2261	0ν
2316	GGAGGGGCTTTCATTGGCGACAGAAATTTCTCCGGGTGAAGCGATCAGCCATCTGTATCC	2257	Db
2260	GAGGGGCTTTCATTGGCGACAGAAATTTCTCCGGGTGAAGCGATCAGCCATCTGTATC	2201	Qy
2256	CCACAGAGGACTCCCTGGAAGTCCGGCGGCAGAGTCTAGCCACCAAGATCCAGGCGGCCT	2197	Db
2200	CACAGAGGACTCCCTGGAAGTCCGGCGGCAGAGTCTAGCCACCAAGATCCAGGCGGC	2141	Qy
2196	CAGAAGAGTACAAAATGGGCAGGACTAAGATCTTCATCCGATTTCCCAAGACCTTGTTTG	2137	рb
2140	AGAAGAGTACAAAATGGGCAGGACTAAGATCTTCATCCGATTCCCCAAGACCTTATT	2081	Qy
2136	TSTGGGCAGGACGGCCCAGGATGGTGTGGCCGTGTTGGTCAGACACCTCGGCTACAAGC TGTGGGCAGGACGGCCCCAGGATGGTGTGGCCGTGTTGGTCAGACACCTCGGCTACAAGC TGTGGGCAGGACGCCCCAGGATGGTGTGGCCGTGTTGGTCAGACACCTCGGCTACAAGC	2077	ad An
		3	}

```
3581 GCTGGGCTGGAAGGTCCTCTTCT-TGGCCAACCCTTCCTTATTCCCTTGTCTGCCTGTCC 3639
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3461 TTTTTTGATGCTTTATAGGAAACTATTTTTTTAAGAAAGCCATTTTCCTACCCTAAACAC 3520
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3396 ATGAGTGGGCCAGGCCGGGCCACAGCAATAGAAAAGCAGAGGCCTGAGCAGGCCAGGCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3341 ATGAGTGGGCCAGGCCGGGCCACCACCAATAGAAAAGCAGAGGGCCTGAGCAGGCCAAGGCCA 3400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3281 GCAAACTCCTGCCTTCTGCTCGCCCCCCTCTTGAGGTGATCAGGAGCCAGGGAGCTACCCC 3340
3336 GCAAACTCCTGCCTGCTGCTCGCCCCCCTCTGAGGTGATCAGGAGCCAGGGAGCTACCCC 3340
336 GCAAACTCCTGCCTGCTGCTCGCCCCCCTCGAGGTGATCAGGAGCCAGGGAGCTACCCC 3395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3221 GACTTACCAAAACTCAAGCTTCCAAACAGGGATCCATGGACACCCTCAAAACCACGCT 3280
3277 CAGTTACCAAAGCTCAAGCTTCCAGACAGGGATCCATGGACACCCTCAAAACCCACGCT 3280
3278 GAGTTACCAAAGACTCAAGCTTCCAGACAGGGATCCATGGACACCCTCAAAACCCAC-CT 3335
                                                                                                                                                                                                                                                                                             2 (bases 1 to 3810)
Ruppert, C., Godel, J., Reinhard, J. and Ba
WYR-2 a novel class-I Myosin identified
Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                     RNMYR2

R. DOTVEGICUS MYR2 mRNA for myosin I heavy chain.

X74800.1 GI:400428

Myosin I heavy chain; MYR2 gene.

Rattus norvegicus.

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

Rattus is Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3157 TCACCAAGGCTAAGAATGGCCACCTGGCTGTGGTGGCCCCACGGCTGAATTCTCGGTGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Trrtrdárigotraradadáaácrarttrrtraádáaádocaftrtroctaccotaáádad 3575
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GAAGGCTTCAGTGGACCCCTGACTCCTGATGCTTCGCTTAGTCCCCTGCTCCCCTCC
                                                                                                                                                          . Ruppert, Friedrich-Miescher-Laboratorium
aft, 72076 Tuebingen, Spemannstr. 37-39,
                                                                                                                                                                                                                                                                                                                  Baehler, M
                                                                                                                                                                                                                                                                                                 in rat brain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ROD 22-SEP-1993
                                                               В
                                                                                                                                 Ъ
                                                                                                                                                              Qy
                                                                                                                                                                                                  Ъ
                                                                                                                                                                                                                               Qy
                                                                                                                                                                                                                                                                    DЬ
                                                                                                                                                                                                                                                                                                   Qγ
                                                                                                                                                                                                                                                                                                                                     Дb
                                                                                                                                                                                                                                                                                                                                                                      Qγ
                                                                                                                                                                                                                                                                                                                                                                                                         DЪ
                                                                                                                                                                                                                                                                                                                                                                                                                                      ν
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δÃ
DЬ
                                                                     734 CAACGACAACTCCAGCCGCTTTGGGAAGTACATGGATGTGCAGTTTGACTTCAAGGGTGC
                                                                                      541 CAACGATAACTCCAGCCGGTTTGGAAAGTACATGGATGTGCAGTTTGACTTCAAGGGTGC 600
                                                                                                                                       674 AGACCCCCTGTTGCAGAGCAACCCTGTGCTGGGAGGCCTTTGGGAATGCCAAGACTCTCCG
                                                                                                                                                        481 AGACCGCCTGTTGCAGAGCAACCCCGTGTTAGAGGCCTTTGGGAATGCCAAGACTCTCCG 540
                                                                                                                                                                                                        BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                            554 TCGGGACCAAGCAGTGATTATTCTGGAGAGAGTGGGGCAGGGAAGACAGAGAGGCCACCAA
                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                               301 AGTACCACCTCATTTGTTTGCAGTGGCTGACACTGTATACCGGGCACTTCGTACTGAGCG 360
                                                                                                                                                                                                                                                                                                                                                                                                             434 GGACCTACAGATCTACACACGGCAACATATGGAAGGCTACCGTGGCGTCAGTTTCTATGA 493
                                                                                                                                                                                                                                                                                                                                                                                                                                241 AGACCTACAGATCTACAGCCGGCAGCATATGGAACGCTACCGTGGTGTCAGTTTCTATGA 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              374 CCGGGAGAACCTCATTTATACCTACATTGGCCCTGTCCTGTCTCTGTCAACCCCTACCG 433
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    314 Terrerecrecade Active Accaergaescrecerre Arreada Acerecesses 273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   121 TGTCCTGCAGAGAATTTCACCAGTGAGGCTGCCTTCATTGAGAACCTCCGGCGGCGGTT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   254 GETACGAGTGACCATGGAGAGGCGCCTTGACTGCCGGAGACCGGGTGGGGGGTGCAAGACTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61 GGTTCGAGTGACCATGGAGAGCGCCTTGACTGCCCGAGACCGGGTAGGGGTGCAGGACTT 120
                                                                                                                                                                                                                                                                                                                                           AGTGCCGCCTCATCTGTTTGCAGTGGCTGACACTGTATACCGGGCGCCTTCGTACTGAGCG 553
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3398;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      905
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00cm_als_in_-\u00c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /db_xref="SPTREMBL:Q63355"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /codon_start=1
/Product="myosin I heavy chain"
/Protein_id="CAA52807.1"
/db_xref="GI:400429"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        88.3%; Score 3232.8; DB 10; Length 3810; 94.8%; Pred. No. 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches 182; Indels
```

5.

FEATURES Source

Location/Qualifiers

480 613

/gene="MYR 2" /gene="MYR 2" 267. .3353 JOURNAL

REFERENCE AUTHORS TITLE

REFERENCE AUTHORS TITLE

JOURNAL

Ruppert, C.
Direct Submission
Submitted (26-AUG-1993) C.

der, Max-Planck-Gesellschaft,

LOCUS DEFINITION ACCESSION

RESULT 3

В Ş В ş Ъ Ş Дb Ş В Ş Ъ Ş В

3576

KEYWORDS SOURCE

ORGANISM

VERSION

1933	GAGACCATGTGCAGCTCCACGAACCCCATCATGCCCCAGTGCTTTGACAAGAGTGAGCT	1874	문 5
	このもつとつで、そのでは、日本のでは、このでは、このでは、このでは、このでは、このでは、このでは、このでは、こ	9	2
1680	GACCTACACTGTGACTGGGTTTCTGGATAAAAACAATGACCTCCTCTTCCGGAACCTGAA	1621	, v
1813	GAAGACCAGGAAATCCCTCGACCGAGGGGAGTTCCGCCTTCTTCATTATGCGGGAGAGGT		В
1620	AAGACCAGGAAATCCCTAGACCGAGGGGGAGTTCCGCCTTCTGCATTATGCTGGAGAGG	1561	Qy
1753	GAAGCTGGAGGACACAATCAAGCACCACCCTCACTTCCTGACGCACAAGCTTGCTGACCA		ф
1560	AAGTTGGAGGACACTGTCAAGCCCCACCCTCACTTCCTGACGCACAAGCTCGCTGA	1501	δ
6		1634	Db .
Ġ	TCCATCTTGGATGAAGAGTGCCTGCGTCCTGGGGAGGCCACGGACCTGACCTTTCTG	4	Qy
	CCAATACTTCAACAACAAGATCATCTGTGACCTGGTGGAGGAGAATTTCAAGGGCATCAT	157	DЬ
1440	TACTTCAACAACAAGATCATCTGTGACCTGGTAGAGGAGAAGTTCA	w	Qy
1573	GCTGACTCTCAAGTCCGAGCAGGAGGAATACGAGGCAGAGGGCATCGCGTGGGAACCTGT	1514	Вр
1380	ACTCTCAAGTCGGAGCAGGAGGAATACGAGGCTGAGGGCATCGCGT	w	Qy
1513	CAGCTTCGAGCAGTTCTGCATCAACTATTGCAATGAGAAGCTGCAGCAGCTCTTCATTGA	1454	Вр
1320	AGCTTCGAGCAGTTCTGCATCAACTACTGCAATGAGAAGCTGCAGCAGCTCTTCATC	2	Qy
1453	GCGAAGCACACAGTTCTTGGGCTCCTGGACATTTATGGCTTCGAAGTGTTTCAGCATAA	1394	рь
1260	CGAAGCACCACGGTTCTTGGGCTCCTGGACATTTACGGCTTTGAAGTGTTTCAGCAI	1201	Qy
1393	CTGGTTGGTCAGAAAGATCAATAGGTCTCTGGCCTCTAAGGACGCTGAGAGCCCCAGCTG		рь
1200	TGGCTGGTCAGAAAGATCAATAGGTCACTGGCCTCTAAGGACGCTGAGAGCCCCAGCT		Qy
w		7	망.
	AACAGGCGGCATATGCAAGGGATGCGCTTGCCAAGGCTGTGTACAGCCGGACATTCAC		Qy
		21	В
1080	CCCTGACCCACAGGAAGATCATCGCCAAGGGGGAAGAGCTCCTGAGCCCACTC	1021	ρ
1213	TGAGAACCAGCTCAAATATCTGACCAGGCTCCTTGGTGTAGGGCACACACA		망
1020	GAGAACCAGCTCAAATATCTGACCAGGCTCCTTGGTGTGGAAGGTACAACACT	961	ρ
\vdash		1094	Db -
960	CTACATCTGGGCAACATCCACTTTGCTGCTGACGAGGACAGCAATGCCCAGGT	901	Qy
1093	GTCAGTCATTGACTTCACTGAGGATGAAGTGGAGGACTTGCTAAGCATCGTGGCCAGCGT	1034	Db
900	TCCGTCATTGACTTCACTGAGGATGAAGTGGAGGACTTGCTCAGCATCGTGGCCAGCG	841	δ
1033	GTGTGCCAAGGTCTCCTCCATCAATGACAAGAGTGACTGGAAGGTTGTGAGGAAGGCGCT	974	рь
840	TGTGCCAAGGTCTCCTCCATCAACGACAAGAGTGACTGGAAGGTTATGAGGAAGGCGC	781	Qy
973	TCTTCGTCGGCTTGGGCTTGGAACGGAACCCCCAGAGCTACTTGTTACCTGGTGAAGGGCCA	914	B 5
i i			2 5
٠ ١			3 5
720	ĊĂĊĠĠĂĠĂĠĠĠĠĠĠĠĠĠĠĠĠĠĠĠĠĠĠĠĠĠĠĠĠĠĠĠĠĠĠ	661	Ş

0 GGATGCTAAAGTCAAGCAGAAATTGATTATGCCAACCTAACCGGAATCTCTGTCAGTAG 2879	282	Qy
4 GGCCTACAAGCCTCGTTCCCGGCAGCTGCTGCTCACACCCCAGTGCTGTGGTCATCGTCGA 3013	295	Db
GGTTACAAGCCTCGCCCCGGCAGCTGCTGCTCACGCCCAGTGCTGTGGTCATTGTGG	276	Qy
CAGGCCTTGGGCTCTGAACCCATCCAGTATGCAGTGCCTGTGGTAAAATACGACCG	289	Db
TGAACCCATCCAGTATGCCGTGCCCGTGGTAAAATACGACCGT	270	Qy
4 TGTCCCCAGACTTTTCATCAGCACACGCCTTGGCACAGAGGAGATCAGCCCCAGAGTGCT 2893	283	Db
GTCCCCAGACTCTTCATTAGCACACGGCTTGGCACAGAGGAGGAGTCAGCCCCAGAGTG	264	Qγ
4 GCAGCAAAAGGCGGTGGCTAGTGAAATTTTCAAGGGCAAGAAGGACAATTACCCCCAGAG 2833	277.	Db
CAGCAAAAGGCGGTGGCTAGTGAAATTTTTCAAGGGCAAGAAGGACAACTACCCCCAG	258	γQ
4 CATGAAGAACATGGTGTGGAAATACTGCCGGAGTATCAGCCCTGAGTGGAAGCAGCAGCT 2773	271	ДD
ATGAAGAACATGGTGTGGAAGTACTGCCGGAGCATCAGCCCTGAGTGGAAGCAGCAGC	252	γо
4 CTCCTGGCCCACCCCCCACCTGCCCTGAGAGAGGCCTCGGAGCTGCTCCGGGAGCTATG 2713	265	Db
TCCTGGCCCACACCCCACCTGCCCTGAGAGAGGCCTCAGAACTGCTACGGGAACT		Qy
TGCGCACGTC	259	Db
GTGCGCGCCTCATTTTTGCTTAACCTGAGGCGGCAACTGCCCCGGAATGTTCTGGAC	240	Qy
4 CCGTGGCTTCATTTTGCGTCATGCACCCCGGTGCCCTGAGAATGCCTTCTTCCTGGACCA 2593	253	Db
CGTGGCTTCATTTTGCGCCATTCACCCCGGTGCCCTGAGAATGCCTTCTTCTTGGACC	234	Qy
4 ACTGGGCCGAAGGAAGCCAAAAGGAAGTGGGCAGCCCAGACTATCCGTAGACTCAT 2533	247	Db
CTGGGCCGGAGGAAGGCAGCCAAGAGGAAGTGGGCAGCCAGACCATCCGTCGACTC	œ	Qγ
4 GCAGAAAFTTCTCCGGGTGAAGCGATCAGCCATCTGTATCCAGTCCTGGTGGCGCGGTAC 2473	241	Db
AATTTCTCCGGGTGAAGCGATCAGCCATCTGTATCCAGTCATGGTGGCGTGGC	222	Qy
4 AGTCCGACGGCAGAGTCTAGCCACCAAGATCCAGGCGGCGTGGAGGGGCTTTCATTGGCG 2413	235	Db
GTCCGGCGGCAGAGTCTAGCCACCAAGATCCAGGCGGCCTGGAGGGGCTTTCATTGGC	216	γQ
4 CAGGACTAAGATCTTCATCCGGATTCCCCAAGACCTTGTTTGCCACAGAGGACTCCCTGGA 2353	29	Дb
AGGACTAAGATCTTCATCCGATTCCCCAAGACCTTATTTGCCACAGAGGACTC	210	Qy
GGATGGGGTGTGTTGGTCAGACACCTTGGCTATAAGCCAGAAGAGTACAAAATGGG 2293	23	Db
GATGGTGTGGCCGTGTTGGTCAGACACCTCGGCTACAAGCCAGAAGAGTACAAAATG	4	γQ
	17	Db
CTGCAGAGGTACAAGTCACTGTGCCCAGAGACATGGCCCCATGTGGGCAGGACGGCCCC	198	Qy
TATGGAGAATCTGCGTGTGCGCAGAGCTGGCTTTGCCTACCGTCGAAAATATGAGGCTTT 2173	211	Db
GAGAATCTGCGCGTGCGCAGAGCTGGCTTTGCCTATCGTCGCAAATATGAC	192	Qy
4 CAAACAGCCGGGTCGCTTTGATGAGGTGCTCATCCGACACCAAGTGAAGTACCTGGGACT 2113	205	Db
AAGCAGCCGGGTCGCTTTGATGAGGTGCTCATCCGACATCAGGTGAAGTACCTGGGAC	186	Qγ
4 AGTGGAGATCCTGAGGTCTAAGGAACCTGCTTATATCCGGTGCATCAAGCCCAAATGACGC 2053	199,	DЬ
TGGAGATCCTGAGGTCTAAGGAGCCTGCCTATATCCGGTGCATCAAGCCAAACGACG	80	Qy
4 CAGTGACAAGAAGCGGCCAGAGACGGTGGCCACCCAGTTCAAGATGAGCCTCTTGCAGCT 1993	193,	DЬ
AGTGACAAGAAGCGGCCAG-GACGGTGGCCACCCAGTTCAAGATGAGCCTCCTGCAGC	174	Оу

MEDITINE POINTS (5), 711-722 (1997) PUBMED 9182797	Bronson, R.T., Smith, D.J., Mueller, K.L., Kerrebrock, Nemhauser, J.L., Hawkins, T.L., Rubin, E.M., Kruglyak, L., expression of PITP alpha: positional causes neurodegeneration via restragenic Suppressional positional	REFERENCE 1 (bases 1 to 3111) AUTHORS Hamilton, B. A C	z	0	3-3-3 CCA-AGĈAÁTAGCA IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	3493	QY 3240 CTTCCAAACAGGATCCATTGCTTAGTTCCATCCCTCCCCTCCCAGTTACCAAACACTCAAG 3239	3180	Db 3254 GGATGGCATCATCATCATCATCAGAGCTTCAGAGCTAGAGGCTAAGAATGG 3253 Oy 3120 CCACCTGGCTGTGGGCCCCACGCCTGAGGCTTCAGACCAAGGCTAAGAATGG 3119 Db 3311 CLILIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	3194 CCGCGTGAACATATCAACATCAACCAGGGCAGCATCAACCAAGACGGCCCTCAAIIIIII 3194 CCGTGTGAACATATCAACATCAACCAGGGCAGCATAACGTTTGCAGGGGTCCAGGAGAGACGAGAGAGA	CÉTÉCAGTGATACCETGTTTGGGTTCAGGAGGTGAAGACAAGAAGAAGAAGGAAG	3014
exon exon	exon exon	exon	exon.			CDS	ýene exon		COMMENT FEATURES Source	AUTHORS TITLE JOURNAL	AUTHORS TITLE JOURNAL	PERFECT.
	/number=4 534713 /genc=*MMIb* /number=5 714812	254452 /gene="MMID" /oumber=3 45353 /gene=.533	KAAKRKWAATTUUV KKUSLATKIOAAWGGFWRVO VAVLHHIOYKREEYKUGKIKK PPIPPALREASELLRELIGHSPROPEARFILDHVRASFILUKGSAICIOSWARGTLORR VPRIEISTRICGTEEISPRWIGHTSKYCRSISPEWKOOLOGKAVASEIFKGKUNTESW VEDAKVKGIDYANLIGISVSLOSEPIOYAVPVKVDRKOYKDREFKGKKUNTPOS VEDAKVKGIDYANLIGISVSLSESEFIOYAVPVKVDRKOYKPRPROLLLITESAVVI LSADRVNNININGGSITFAGGPGROCIIDFTSGSELLITKAKNGHLAVVAPRLKSR 138 253	LHLGNI II YAS LYLVKOOCAKYS I NUKAS KYVHONIGENIERNEHYPY NYKKYLKINDIS NILGNI II YAABDSINAOYTENOLKI KIKSENKYKHKALSY LET EDEYEDLLS I'AS Y NEOAAYARDALAKAY SATTULKIKSENKYKHKALSY LET EDEYEDLLS I'AS Y FOHNSE EQFOL NYKNEKAY SATTULKIK LIRSLASKDAESENRETTYVLKIK IIAKSES KRESSINRETTYVLKIK LIRSLASKDAESENRETTYVLKIK LIRSLASKDAESENRETTYVLKILDI I'GEEV KFGII'S ILDEECLKREGATDLTPLEK LEDTYKE PHERITHK LAOKTIK SUTGELDEK LEDTYKE PHERITHK LAOKTIK SUTGELDKE PHERITHK LAOKTIK SUTGELDKE PHERITHK LAOKTIK SUTGELDKE PHERITHK LAOKTIK SUTGELDKE PHERITHK LAOKTIK SUTGEL RIKKET NOSAKAPEN AGET KKELSENK RETYN AGET KKELSENK KRETYN KSILPET PHERITHK LAOKTIK SUTGEL RIKKET KONAKAPEN OKSELSENK RETYN ARFERTILFATENS TATIKK KSILPET PHERITHKAAGED KKELSENK RETYN ARFERTILFATENS TATIKK KSILPET PHERITHKAAGED KKELSENK RETYN ARFERT KSILPET KSILPET PHERITHKAAGED KKELSENK RETYN ARFERT KSILPET PHERITHKAAGED KARETYN ARFERT KSILPET PHERITHKAAGED KARETYN ARFERT KSILPET PHERITHKAAGED KARETYN ARFERT KSILPET PHERITHKAAGED KARETYN ARFERT KSILPET PHERITHKAAGED KSILSENK RETYN ARFERT KSILPET PHERITHKAAGED KSILSEN RETYN ARFERT KSILPET PHERITHKAAGED KSILSEN RETYN ARFERT KSILPET PHERITHKAAGED KSILSEN RETYN ARFERT KSILPE	/FOUNCE "MYOSIN I beta" /FOTEIL 14 = "ARC53264.1" /Gb_xref="GI:233202" /translation="MESALTARDRYGYODFVLLENETSEAAFIENLRREFRENLIYTY IGPYLVSVMPYRDLOIYSRQHMERYRGVSFYEVPPHLFAVADTYVRALRTERRDQAVM RIGIERMRGCX-ARTICLOFYAETCPAFERGAVRDRLLGSNPVLFARGX-CXX-ERGAVM RIGIERMRGCX-BROGAVGGHLLSYI EKGGAVRDRLLGSNPVLFARGX-CXX-ERGAVM RIGIERMRGCX-BROGAVGGHLLSYI EKGGAVRDRLLGSNPVLFARGX-X-X-X-X-X-X-X-X-X-X-X-X-X-X-X-X-X-X-	/gene="MMIb" /number=1 123098 /gene="MMIb" /codon_start=1	/map="between DllNds1 and DllMit7" /rissue_type="brain" /note="poly(A)+ RNA, RT-PCR sequence of uncloned RNA" /gene="MMID" 1311 1137	/organism="Mus musculus" /strain="DBA/2J" /db_xref="taxon:10090" /chromosome="1"1"	Cambridge Sequence On Jul 2,	J (bases 1 to 3111) Hamilton,B.A. Hawkins, Lander,E.S. Direct Submission Submitted (01-TIT	2 2 (bases 1 to 3111) Hamilton,B.A., Hawkins,T.L., Mueller,K.L., R Direct Submission Submitted (08-APR-1997) Whitehead Toots.	

٠.

•.

. .

```
В
                                                                                                                                                                                                                                                                                                                                                            Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                  BASE CO
         õ
                           Вb
                                            δÃ
                                                                 В
                                                                              QΥ
                                                                                              B
                                                                                                                QΥ
                                                                                                                                   B
                                                                                                                                               δ
                                                                                                                                                                     Дb
                                                                                                                                                                                  δÃ
                                                                                                                                                                                                  В
                                                                                                                                                                                                                   Ωy
                                                                                                                                                                                                                                        β
Q
                                                                                                                                                                                                                                                                       B
                                                                                                                                                                                                                                                                                         οy
                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                         Qy
                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                           Qy
밁
                                                                                                                                                                                                                                                                                                                                                                                                                  Query
Best L
Matche
                                                                                                                                                                                                                                                                                                                                                                                                                  tches
                                                                                                                                                                                                                                                                                                                                                                                                                                                           COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           exon
                                                                                                                                                   483
                                                 663
                                                                  541
                                                                                 603
                                                                                                   481
                                                                                                                   543
                                                                                                                                     421
                                                                                                                                                                      361
                                                                                                                                                                                       423
                                                                                                                                                                                                       301
                                                                                                                                                                                                                       363
                                                                                                                                                                                                                                         241
                                                                                                                                                                                                                                                          303
                                                                                                                                                                                                                                                                                            243
661
                723
                                 601
                                                                                                                                                                                                                                                                           181
                                                                                                                                                                                                                                                                                                             121
                                                                                                                                                                                                                                                                                                                             183
                                                                                                                                                                                                                                                                                                                                                               123
                                                                                                                                                                                                                                                                                                                                                                                                                  Local Sinhes 3109;
                                                                                                                                                                                                                                                                                                                                              61
                                                                                                                                                                                                                                                                                                                                                                                                 63
                                                                                                                                                                                                                                                                                                                                                                                                                                   Match
                                                                                                                                                                                                                                                                                                                                                                              GGGAGAACCTCATTTATACCTACATCGGTCCTGTCCTAGTCTCTGTCAATCCCTACCGAG
                                                                                                                                                                                                                                                                                                                                             CCGTGGGAGGCCACATTCTCAGTTACCTCCTGGAAAAGTCCCCGGGTGGTGCACCAAAATC
                                                                                                  ACGATAACTCCAGCCGGTTTGGAAAGTACATGGATGTGCAGTTTGACTTCAAGGGTGCCC
                                                                                                                                             ACCGCCTGTTGCAGAGCAACCCCGTGTTAGAGGCCTTTGGGAATGCCAAGACTCTCCCGCA
                                                                                                                                                                              GACTGCTCCAGTTCTATGCAGAGACCTGCCCAGCCCCTGAACGGGGTGGCCAGTGCGAG
                                                                                                                                                                                                       GGGACCAGGCAGTGATTTCTGGAGAGAGTGGGGCAGGCAAGACAGAGGCCACCAAGA
                                                                                                                                                                                                                GGGACCAGGCAGTGATTTCTGGAGAGTGGGGCAGGCAAGACAGAGAGCCACCAAGA
                                                                                                                                                                                                                                                                                   ACCTACAGATCTACAGCCGGCAGCATATGGAACGCTACCGTGGTGTCAGTTTTCTATGAAG
       TCCGTCGGCTGGGCTTGGAACGGAACCCCCAGAGCTACTTGTACCTGGTGAAGGGCCAGT
                                                                                                                                                                      GACTGCTCCAGTTCTATGCAGAGACCTGCCCAGCCCCTGAACGGGGTGGCGCAGTGCGAG
                                                                                                                                                                                                                                                                           ACCTACAGATCTACAGCCGGCAGCATATGGAACGCTACCGTGGTGTCAGTTTCTATGAAG
                                                                                                                                    ACCGCCTGTTGCAGAGCAACCCCGTGTTAGAGGCCTTTGGGAAATGCCAAGACTCTCCGCA
TCCGTCGGCTGGGCTTGGAACGGAACCCCCAGAGCTACTTGTACCTGGTGAAGGGCCAGT
                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                           744
                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /gene="MMID"
/number=9
1119 122
                                                                                                                                                                                                                                                                                                                                                                                                                                                           a
                                                                                                                                                                                                                                                                                                                                                                                                                                                         1389. .1480

/gene="MID"
/number=13
1481. .3110
/gene="MMID"
/pote="genomic structure not determined"
/note="genomic structure for determined"
1 839 c 894 g 634 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /gene="MMIb"
/number=12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /number=11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /number=10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /gene="MMIb"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /gene="MMIb"
                                                                                                                                                                                                                                                                                                                                                                                                                        84.6%;
                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                       Score 3097.4;
Pred. No. 0;
                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                 DB
                                                                                                                                                                                                                                                                                                                                                                                                                1;
                                                                                                                                                                                                                                                                                                                                                                                                                                 10;
                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                Length
                                                                                                                                                                                                                                                                                                                                                                                                                                  3111;
                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                        422
                                                                                                                                                                                                                                                                                                                                                               182
                                                                                                                                                                                                                                                                                                                                                                                                 122
                                                                                 662
                                                                                                                                    480
                                                                                                                                                                     420
                                                                                                                                                                                      482
                                                                                                                                                                                                       360
                                                                                                                                                                                                                                         300
                                                                                                                                                                                                                                                                          240
                                                                                                                                                                                                                                                                                                            180
                                                                                                                                                                                                                                                                                                                                              120
                                                                                                                                                                                                                                                                                                                                                                                60
                                                                  600
                                                                                                   540
                                660
                                                                                                                                                                                                                                                                                                                                                                                                                ۲.
```

```
Qγ
                   밁
                                  γQ
                                                           Вþ
                                                                            QΥ
                                                                                                  Ър
                                                                                                                 Qy
                                                                                                                                         д
                                                                                                                                                        δÃ
                                                                                                                                                                              В
                                                                                                                                                                                              δÕ
                                                                                                                                                                                                                       DЬ
                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                              Ъ
                                                                                                                                                                                                                                                                              Qy
                                                                                                                                                                                                                                                                                                      Ъ
                                                                                                                                                                                                                                                                                                                     Qy
                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                              Qy
                                                                                                                                                                                                                                                                                                                                                                                     맑
                                                                                                                                                                                                                                                                                                                                                                                                     Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                           Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                              QY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Dβ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       QY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DЪ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δõ
                                                                                                                                                                                 1501
                                                                                                                                                                                                                                                                1381
                                                                                                                                                                                                                                                                                   1443
                                                                                                                                                                                                                                                                                                                           1383
                                                                                                                                                                                                                                                                                                                                              1261
                                                                                                                                                                                                                                                                                                                                                                                      1201
                                                                                                                                                                                                                                                                                                                                                                                                         1263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1083
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            843
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   783
                                                                                                                                                                                                                                                                                                                                             TACATCTGGGCAACATCCACTTTGCTGCTGACGAGGACAGCAATGCCCAGGTTACTACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CCATCTTGGATGAAGAGTGCCTGCGTCCTGGGGAGGCCACGGACCTGACCTTTCTGGAGA 1502
                                                                                                                                                                                                                                                                                                      AGTACTTCAACAACAAGATCATCTGTGACCTGGTAGAGGAGAAGTTCAAGGGCATCATCT 1442
                                                                                                                                                                                                                                                                                                                                                                                                                                     GAAGCACCACGGTTCTTGGGCTCCTGGACATTTACGGCTTTGAAGTGTTTCAGCATAACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGCTGGTCAGAAAGATCAATAGGTCACTGGCCTCTAAGGACGCTGAGAGCCCCAGCTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CCCTGACCCCACAGGAAGATCATCGCCAAGGGGGAAGAGCTCCTGAGCCCACTGAACCTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AGAACCAGCTCAAATATCTGACCAGGCTCCTTGGTGTGGAAGGTACAACACTTAGGGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GTGCCAAGGTCTCCTCCATCAACGACAAGAGTGACTGGAAGGTTATGAGGAAGGCGCTGT
                                                          GTGACAAGAAGCGGCCAG-GACGGTGGCCACCCAGTTCAAGATGAGCCTCCTGCAGCTCG
                                                                                                            AGACCATGTGCAGCTCAATGAACCCCATCATGGCCCAGTGCTTTGACAAGAGTGAGCTCA 1742
                                                                                                                                                    CCTACAGTGTGACTGGGTTTCTGGATAAAAACAATGACCTCCTCTTCCGGAACCTGAAGG
                                                                                                                                                                               AGACCAGGAAATCCCTAGACCGAGGGGAGTTCCGCCTTCTGCATTATGCTGGAGAGGTGA 1622
                                                                                                                                                                                                                     AGTTGGAGGACACTGTCAAGCCCCACCCTCACTTCCTGACGCACAAGCTCGCTGACCAGA 1562
                                                                                                                                                                                                                                                                                                                                                                                                                             GAAGCACCACGGTTCTTGGGCTCCTGGACATTTACGGCTTTGAAGTGTTTCAGCATAACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CCCTGACCCACAGGAAGATCATCGCCAAGGGGGAAGAGCTCCTGAGCCCACTGAACCTTG
                  CCTACAGTGTGACTGGGTTTCTGGATAAAAACAATGACCTCCTCTTCCGGAACCTGAAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGCTGGTCAGAAAGATCAATAGGTCACTGGCCTCTAAGGACGCTGAGAGCCCCAGCTGGC
 AGCAGCCGGGTCGCTTTGATGAGGTGCTCATCCGACATCAGGTGAAGTACCTGGGACTGA
                                                                                                  {	t AGACCATGTGCAGCTCAATGAACCCCATCATGGCCCCAGTGCTTTGACAAGAGTGAGCTCA}
                                                                                                                                                            1682
                                                                                                                                                                                                                                                                                                                                             1320
                                                                                                                                                                                                                                                                                                                                                                                                                            1200
                                                                                                                                                                                                                                                                                                                                                                                                                                               1262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1082
                                                           1740
                                                                                                                                         1620
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1022
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    962
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            902
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    842
```

```
Ъ
                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                        Б
                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                        ВР
                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                        Db
                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                    Ŷ
                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                    δ
                                                                                                                                                                                                                                                                                                                                                                                                      д
                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                      5
2942 TGGTGCTGCAGAGTGATCATGTGATCGAGACACTAACCAAGACGGCCCTCAGTGCTGACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                         2821
                                                         2882
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                         2761
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                         2822
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ρ
                                                                                                 2762 GTTACAAGCCTCGCCCCGGGCAGCTGCTGCTCACGCCCAGTGCTGTGGTCATTGTGGAGG 2821
                                                                                                                                         2641
                                                                                                                                                         2702
                                                                                                                                                                         2581
                                                                                                                                                                                         2642
                                                                                                                                                                                                        2521
                                                                                                                                                                                                                         2582
                                                                                                                                                                                                                                2522 TGAAGAACATGGTGTGGAAGTACTGCCGGAGCATCAGCCCTGAGTGGAAGCAGCAGCTGC 2581
                                                                                                                                                                                                                                                                                        2462
                                                                                                                                                                                                                                                                                                        2341
                                                                                                                                                                                                                                                                                                                        2402
                                                                                                                                                                                                                                                                                                                                       2281
                                                                                                                                                                                                                                                                                                                                                      2342
                                                                                                                                                                                                                                                                                                                                                              2282 TGGGCCGGAGGAAGGCAAGAGGAAGTGGGCAGCCCAGACCATCCGTCGACTCATCC 2341
                                                                                                                                                                                                                                                                                                                                                                                                                    2161
                                 TGAGTGATAGCCTATTTGTGGTTCACGTGCAGCGTGAAGACAACAACAAGCAGCAGAAGGGAGATG 2941
                          TGAGTGATAGCCTATTTGTGCTTCACGTGCAGCGTGAAGACAACCAGGAAGGGAAGATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2041
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1981 ATGGTGTGGCCGTGTTGGTCAGACACCTCGGCTACAAGCCCAGAAGAGTACAAAATGGGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2042 ATGGTGTGGCCGTGTTGGTCAGACACCTCGGCTACAAGGCCAGAAGAGTACAAAATGGGCA 2101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1982 TGCAGAGGTACAAGTCACTGTGCCCAGAGACATGGCCCATGTGGGCAGGACGGCCCCAGG 2041
1911 TGCAGAGGTACAAGTCACTGTGCCCAGAGACATGGCCCATGTGGGCAGGACGGCCCCAGG 2041
1921 TGCAGAGGTACAAGTCACTGTGCCCAGAGACATGGCCCATGTGGGCAGGACGGCCCCAGG 1980
                                                         ATGCTAAAGTCAAGCAGAGAATTGATTATGCCAAGCCTAACCGGAATCTCTGTCAGTAGCC
                                                                  ATGCTAAAGTCAAGCAGAGAATTGATTATGCCAACCTAACCGGAATCTCTGTCAGTAGCC
                                                                                         GTTACAAGCCTCGCCCCCGGCAGCTGCTGCTCACGCCCAGTGCTGTGGTCATTGTGGAGG
                                                                                                                      1861
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1801
                                                                                                                                                       TGAAGAACATGGTGTGGAAGTACTGCCGGAGCATCAGCCCTGAGTGGAAGCAGCAGCTGC
                                                                                                                                                                                                                                                      TGGGCCGGAGGAAGGAGGAAGTGGGCAGCCCAGACCATCCGTCGACTCATCC 2280
                                                                                                                                                                                                                                                                                                                                                                                            AGAAATTTCTCCGGGGTGAAGCGATCAGCCATCTGTATCCAGTCATGGTGGCGTGGCACAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGACTANGATCTTCATCCGATTCCCCCAAGACCTTATTTGCCACAGAGGACTCCCTGGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGACTAAGATCTTCATCCGATTCCCCAAGACCTTATTTGCCACAGAGGACTCCCTGGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3001
                          2880
                                                         2820
                                                                                                                                                                                                        2641
                                                                                                                                                                                                                        2520
                                                                                                                                                                                                                                                                                                                                                                                     2220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2040
```

δ В Ş д Ş DЬ Ş Вb δ dd δ

BASE COUNT	CDS	FEATURES FEATURES FEATURES		RESULT 5 HSMYOIB LOCUS DEFINITION ACCESSION VERSION KEYWORDS SOURCE	Db 2881 Oy 3002 Db 2941 Oy 3062 Db 3001 Oy 3122 Db 3061
/ COCOUL_SCATE=1 / PRODUCTE "MYOSIN I beta" //Protein_id="CAA67131.1" //D_XYEef="GI:926311" //db_XYEef="GI:926311" //db_XYEef="WYES-PROT:000159" //translation="MYES-PROT:000159" //translation="MYES-	/organism="Homo sapiens" /db_xref="faxon:9606" /map="17p3.3-p13.3" /tissue_type="kidney" /dev_stage="adult" 663152	<pre>2 (bases 1 to 3384) Crozet,F. Direct Submission Direct Submission Submitted (17-JUN-1996) F. Crozet, Institut Pasteur, Unite de Genetique Moleculaire Humaine, 25 rue du Docteur Roux, F- 75724, PARIS, cedex 15, FRANCE Location/Qualifiers 1384</pre>	M Homo sapiens Elwaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; 1 (bases 1 to 3384) Crozet, F., El-Amraoui, A., Blanchard, S., Lenoir, M., Ripoll, C., Vago, P., Hamel, C., Fizames, C., Levi-Acobas, F., Depetris, D., Cloning of the genes encoding two murine and human cochlear genomics 40 (2), 332-341 (1997) 9119401	HSMYOIB H.sapiens mRNA for myosin-I beta. X98507 X98507.1 GI:1926310 Myosin I beta. human.	TGGTGCTGCAGAGTGATCATGTGATCGAGACACTAACCAAGACGGCCCTCAGTGCTGACC 2940

*

Оу	Qy Db	Qy Db	Qу	Qy Db	Db Oy	Db Qy	Оy	Оу	Qy Db	Oy Db	Оу	Qу	ОУ	Db Qy	Qy Db	Qу	Qu Ma	ORIGIN
1002 AAGGTACAACACTTAGGGAAGCCCTGACCACAGGAAGATCATCGCCAAGGGGGAAGAGC 1061	942 GCAATGCCCAGGTTACTAGTGAGAACCAGCTCAAATATCTGACCAGGCTCCTTGGTGTGG 1001	882 TCAGCATCGTGGCCAGCGTCCTACATCTGGGCAACATCCACTTTGCTGCTGACGAGGACA 941	822 AGGTTATGAGGAAGGCGCTGTCCGTCATTGACCTCACTGAGGATGAAGTGGAGGACTTGC 881	762 TGTACCTGGTGAAGGGCCAAGTGTGCCAAGGTCTCCTCCATCAACGACAAGAGTGACTGGA 821		642 CCCGGGTGGTGCACCAAAATCACGGAGAGGGGAACTTCCACGTCTTTTACCAGCTACTGG 701	582 AGTTTGACTTCAAGGGTGCCCCCGTGGGAGGCCACATTCTCAGTTACCTCCTGGAAAAGT 641	522 GGAATGCCAAGACTCTCCGCAACGATAACTCCAGCCGGTTTGGAAAGTACATGGATGTGC 581	462 AACGGGGTGGCGCAGTGCGAGACCGCCTGTTGCAGAGCCAACCCCGTGTTAGAGGCCCTTTG 521	402 GCAAGACAGAGGCCACCAAGAGACTGCTCCAGTTCTATGCAGAGAGACCTGCCCAGCCCCTG 461	342 GGGCACTTCGTACTGAGCGTCGGGACCAGGCAGTGATGATTTCTGGAGAGAGA	282 GTGGTGTCAGTTTCTATGAAGTACCACCTCATTTGTTTGCAGTGGCTGACACTGTATACC 341	222 TCTCTGTCAATCCCTACCGAGACCTACAGATCTACAGCCGGCAGCATATGGAACGCTACC 281	162 AGAACCTCCGGCGGCGGTTCCGGGAGAACCTCATTTATACCTACATCGGTCCTGTCCTAG 221	102 GGGTAGGGGTGCAGGACTTTGTCCTGCTGGAGAATTTCACCAGTGAGGCTGCCTTCATTG 161	42 CGGCCCTGGGCAGTGACGGGGTTCGAGTGACCATGGAGAGCGCCTTGACTGCCCGAGACC 101	Query Match 71.7%; Score 2626.2; DB 9; Length 3384; Best Local Similarity 87.1%; Pred. No. 0; Matches 2918; Conservative 0; Mismatches 428; Indels 5; Gaps 3;	IN
										· · · · · -	. 			*				
рь Q4	pb 05	Db Q	Оу	DЬ	ОУ	ОУ	Db V	Ор	Db	Db	Db Q	Db Q	y dd (y	Db X	2 B &	o dd 4	B 4	Qy
2081 CAGAAGAGTACAAAATGGGCAGGACTAAGATCTTCATCCGATTCCCCAAGACCTTATTTG 2140	4 4	GCGCAAATATGAGGCTTTCCTGCAGAGGTACAAGTCACTGTGCCCAGAGACATGGCCCA	AGGTGAAGTACCTGGGACTGGTGGAGAATCTGCGCGTGCCCAGACCTGGCTTTGCCTATC	GCATCAAGCCAAACGACCCGAGCCGGGTCGCTTTGATGAGGTGCTCATCCGACATC [AGATGAGCCTCCTGCAGCTCGTGGAGATCCTGAGGTCTAAGGAGCCTGCCT	1722 GCTTTGACAAGAGTGAGCTCAGTGACAAGAAGCGGCCAG-GACGGTGGCCACCCAGTTCA 1780	6.2 TUCTUTTUUGGAACUTTAAAGGAGACCATTATTGUCCAGT. 1	TCCATTATGCTGGAGAGGTGACCTACAGTGTGACTGGGTTTCTGGATAAAAACAATGACC	0-0	2 GGACCTGACCTTTCTGGAGAAGTTGGAGGACACTGTCAGCCCCACCCTGACTTCCTGA 1	A BOAAGTTCAAGGCATCATCTCCATCTTGGATGAAGAGTGCTGCGTCCTGGGGGAGGCCA	CALCETTAL GOODERS TO THE ACCUS OF THE ACCU	2 TGCAGCAGCTCTTCATCGAGCTGACTCTCAAGTCGAGCAGGAGGAATACGAGGCTGAGG IIIIIIIIIIIIIII	TOWNS TO FINANCIAL TANGENT FOR THE ABSTRACT	THE CANAGE OF THE CANAGE AND ACCOUNT CONTROL OF T	TOTAL CARGE CONTROL TO THE CONTROL T	TITLE TO THE TABLE OF THE TABLE	1062 TCCTGAGCCCACTGAACCTTGAACAGGCGGCATATGCAAGGGATGCGCTTGCCAAGGCTG 1121

Ş

```
Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ф
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
3221 GACTTACCAAAAACTCAAGCTTCCAAACAGGGATCCATGGACACCCTCAAAACCCACGCT 3280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ъ
                                               3154 AAAGGCGCCCACTGGACCATCCCAACGCCCAAAGCTTTGCTTTTTCTCCTCCTCCCCTTCC 3213
                                                                                  Дb
                                                                                                                                                               3101 TCACCAAGGCTAAGAATGGCCACCTGGCTGGTGGTGGCCCCACGGCTGAATTCTCGGTGAT 3160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                           3034 Triccade de de cece de cade de cecario de compresa en cece de creción de compresa de 
                                                                                                                                                                                                                                                 3041 TTGCAGGGGGTCCAGGGCAGGGACGGCATCATTGACTTCACATCGGGCTCAGAGCTTCTCA 3100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                           2981 AGACGGCCCTCAGTGGTGACCGCGTGAACAATATCAACATCAACCAGGGCAGCAGCATAACGT 3040
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Вb
                                                                                                                                                                                                                                                                                                                                                                                                       2914 ACATAAAGCAAAAGGGAGATGTGGTGGTGCTGCAGAGTGACCACGTGATTGAGACGCTGACCA 2973
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                2921 ACAACAAGCAGAAGGAGATGTGGTGGTGCTGCAGAGTGATCATGTGATCGAGACACTAACCA 2980
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2861 CCGGAATCTCTGTCAGTAGCCTGAGTGATAGCCTATTTGTGCTTCACGTGCAGCGTGAAG 2920
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2801 GTGCTGTGGTCATTGTGGAGGATGCTAAAGTCAAGCAGAGAATTGATTATGCCAACCTAA 2860
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2734 Tretanantaceaccecanesecracanecercecrececescascrectecrecrececen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    д
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2741 TGGTAAAATACGACGGTAAGGGTTACAAGCCTCGCCCCGGCAGCTGCTGCTCACGCCCA 2800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2681 AGATCAGCCCCAGAGTGCTTCAATCCTTGGGCTCTGAACCCATCCAGTATGCCGTGCCCG 2740
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TCACCAAGGCCAAGAACGGGCACCTGGCTGTGGTCGCCCCACGGCTGAATTATCGGTGAT 3153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2554 CTGAGTGGAAGCAGCAGCAGCAGAAGGCCGTGGCTAGTGAGATCTTCAAGGGCAAGA 2613
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2561 CTGAGTGGAAGCAGCAGCTGCAGCAAAAGGCGGTGGCTAGTGAAATTTTCAAGGGCAAGA 2620
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2494 AGGTTCTGCGGGAGTTGTGGATAAAGAACATGGTGTGGAAATACTGCCGGAGTATCAGCC 2553
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2501 AACTGCTACGGGAACTGTGCATGAAGAACATGGTGTGGAAGTACTGCCGGAGCATCAGCC 2560
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2441 CCCGGAATGTTCTGGACACCTCCTGGCCCACACCCCCACCTGCCCTGAGAGAGGCCTCAG 2500
2434 CCCGGAATGTCCTGGACACCTACTGGCCCACCCCCCACCTGCCCTGAGAGAGGCCTCAG 2500
2439 CCCGGAATGTCCTGGACACCTACTGGCCCACCCCCCCACCTGCCCTGCGAGAGGCCTCAG 2493
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2381 ATGCCTTCTTCTTGGACCACGTGCGCGCCTCATTTTTGCTTAACCTGAGGCGGCAACTGC 2440
2374 ACGCCTTCTTCTTGGACCATGTGCGCACGTCTTTTTGCTAAACCTGAGGCGCAACTGC 2440
2374 ACGCCTTCTTCTTGGACCATGTGCGCACGTCTTTTTTGCTAAACCTGAGGCGGCAGCTGC 2433
                                                                                                                                                                                                                                                                                                                  AGACAGCCTTCAGTGCCAACCGCGTGAACAGCATCAACATCAACCAGGGCAGCATAACGT 3033
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CCGGAATCTCTGTCAGCAGCCTGAGCGACAGTCTTTTTGTGCTTCATGTACAGCGTGCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2194 GGAGGGCTTTCACTGGCGGCAGAAATTCCTCCGGGTGAAGAGATCAGCCATCTGCATCC 2253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2201 GGAGGGGCTTTCATTGGCGACAGAAATTTCTCCGGGTGAAGCGATCAGCCATCTGTATCC 2260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGATCAGCCCCCAAGTGCTGCAGGCCTTGGGCTTCTGAGCCCATTCAGTATGCGGTGCCTG 2733
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2141 CCACAGAGGACTCCCTGGAAGTCCGGCGGCAGAGTCTAGCCACCAAGATCCAGGCGGCCT 2200
2134 CCACAGAGATGCCCTGGAGGTCCGGCGGCAGAGCCTGGCCACAAGATCCAGGCGGCCT 2200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AGACCATCCGTCGACTCATCCGTGGCTTCATTTTGGGCCATTCACCCCGGTGCCCTGAGA 2380
```

Ş Д Ş DЬ δÔ ДĎ Ş В Ş В Ş 밁

BASE COORIGIN			
[6] SE	Part .		
3'UTR COUNTR	FEATURES SOU	ORGANIS REFERENCE AUTHORS TITLE JOURNAL MEDITHORS PUBMED REFERENCE FUBMED TITLE JOURNAL JOURNAL	OK C BELL
UTF	TUI S CD	ORGA EFFEREI AUTHC TITLE JOURN MEDLI PUBM EFFEREN AUTHO AUTHO TITLE JOURNIA	Qy Qy Db Db Db Db Db Dc Dc Dc CC CC CC DC CC CC CC CC CC CC CC CC CC
- ~	SOUR SOUR SOUR SOUR	ORGANI: EFERENCE AUTHORS TITLE JOURNAL MEDLINE PUBMED PERENCE PUTHORS TITLE JOURNAL	Db 3 Qy 3 Db 3; Qy 33 Db 3; Db 33 Db 33 Db 33 CD 33 DD 33 DD 33 DD 100000000000000000000000000000000000
	SOURCE SOURCE 'UTR	ORGANISM REFERENCE AUTHORS TITLE JOURNAL MEDLINE PUBNED PUBNED REFERENCE AUTHORS TITLE JOURNAL	一百多哥哥 整月 (2) (1)
7		Z	2 9 2 1,
770	Western USA	Bos tauri Eukaryota Mammalia, Bovidae, 1 (bases 2hu,T an A novel m FBBS Lett 94148088 8313976 2 (bases 2hu,T.	
a 3 T /	te	Bos taurus Eukaryota; Mammalia; E Bovidae; Bc Bovidae; Bc Zhu,T. and A novel myo FEBS Lett. 94148088 8311976 2 12976 2 12hu,T. sobi	CAGTTACCAAAGAGTCGAATTTCCCAGACCAGGACCCAGGGACCCACCT GCAAACTCCTGCCTCTTGCTCGCCCCCTCTTGAGGTCAGGAGCCAGGAGCCACCT [
/pr /pr /db /db /tr IGP ISG SREY RLGY RLHL LHL TOKKG FQHN KFKG FQHN KFKG FQFN KFKG AGFN AGFN AGFN AGFN AGFN AGFN AGFN AGF	B 8	s taurus karyota; mmmalia; E vidae; Bc (bases 1 myo 85 Lett. 48088 3976 (bases 1 ,T. and 100-15 Lett. 48088 1 ,T. and 101-15 Lett. 50 mil tred in the second	TTACE TTTI
DPRV PP PP PP PP PP PP PP PP PP P	Loca 1. /org/db_/clc/clc/sex/tiss/clon/clon/clon/clon/clon/clon/clon/clon	uru ota la; la; es es es and my	TCC
/Product="myosin 1" //protein_id="AAA1756.1" //db_xref="01:43637" //translation="MeSALTARDRYGYODFVLLENFTSEAAFIENLRRRERENLIYTISESGAGKTEATKRLOFYAETGHAFTSEAAFIENLRRRERENLIYTISESGAGKTEATKRLOFYAETGHAFTSEAAFIENLARTERGOAVRLIGSNEYLLEAGGAVRALTERGOAVRLIGSNEYLLEAGGAVRALTEYOLLEGGEETLR RIGGERYADVGFDFKGAPVGGHILSYLLEKSRVYHONHGERNEHLFYOLLEGGEETLR NLEGAAYADALKAYVSRTFTWLIAKINELAGADASKALTYIDFTEDEVEDLISIVASY RIGKLARAYVSRTFTWLIAKINELAGADASFSHKKILAKGALTYIDFTEDEVEDLISIVASY FOHNSERGFLYVGRALGATHKILAKGACLESPLLEFTLKSEGEEYERGAYARDALKAYVSRTFTWLIAKINELAGADASFSHKSTTVGLILGIVGEEV LHYAGEVTYNVTGFLDKNUDLLFRNLKSTMGSEEYERGGTAMEPOYENKIICDLVEE TOFKMSLLEILELIKKSEGATDLFFLEKLEDTIKOHFHFLTHKLADGRTRKSILGIVGEEV LHYAGEVTYNVTGFLDKNUDLLFRNLKSTMGSEENDILGOFENSLEILGIVGEET AGATARKYLEILKSEGATOLTFLEKLEDTIKOHFHFLTHKLADGRTRKSLDRGEFR AGATARKYLEILKSEGATATTOATWRGFFORGKFLKVLGOFEDVLTHOVKYLGLMENGLRVRR KAAKKWAAQTIRRLIGGFILRHAFGCPENAFFUDHYTTSFLANLRGURWRTTGFR RETURTGESAAFKIOATWRGFFORGKFLKVRRSAICIGSWARGTLGRR VPRLEISTRLGADEINFRULGALGSEPIQYAVPUVRDHGYKYRERGLEKGKDNYPOS AKKRENLIDTSW VEDAKVKOLTENAVIOTSW VEDAKVKORIETVNLTGISVSSLSSSLSDIFVLHYOREDNKGMSTAVIOTSW VEDAKVKORIETVNLTGISVSSLSSSLSDIFVLHYOREDNKGMSTAVIOTSW VEDAKVKORIETVNLTGISVSSLSSSLSDIFVLHYOREDNKGMSTAVIOTSW VEDAKVKORIETVNLTGISVSSLSSSLSDIFVLHYOREDNKGMSTAVAVITSTAN VIJENAVITSHLANDASHAVIT	S : 7 2 0 8 2 6 2 3 1 1 1 1 1 1	taurus rryota; Metazoa; Ch nalia; Eutheria; Ce dae; Bovinae; Bos. bases 1 to 3505) T. and Ikebe, M. vel myosin I from L Lett. 339 (1-2), 8088 1 to 3505)	TTACCAAAGAGTCGAAAAAACTCCTGCCTTCTGCT
in i	urve University, ation/Qualifiers 3505 3505 ganism="Bos tauru _xref="taxon:9913 xr="male" xr="type="adrena, itech Usa," 100 day 110 da	s wetazoa; Eutheria; Butheria; To 3505 l Ikebe, M. To 3505 l Ito 3505 l Ito 3505 l Ito 3505)	AGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG
L ide	NOV-199 e Unive ion/Qua: ion/Qua: ios="Bc iss="Bc iss=	tazoa; neria; neria; nae; Bo; 3505) be,M. I from (1-2),	TTC:
"myos id=" id=" id=" 'YRDL ion=" 'PARDL PARDL PA	rt= "".19	Oa; ia; ia; 505505 fr. fr. 605)	TGC TGC TGC TGC
Sir AAAA 436 436 CRL QII CRL QII CRL QII CRL QII CRL QII CRL QII CRL QII CRL QII CRL QII CRL QII CRL QII CRL QII CRL QII CRL CRL CRL CRL CRL CRL CRL CRL CRL CRL	ersers	a; Ch a; Ce Bos. 05) 1. irom L 2), 3	ATTI CCC.
YSI YSI YSI YSI YSI YSI YSI YSI YSI YSI	University, 10 University, 10 University, 10 Iniversity, 10 Iniver	Chordata; Cetartiod s. n bovine a	
I" 756: 37" 37" 37" 37" 37" 37" 37" 377TE CAK ATDI ATDI ATDI ATDI ATDI ATDI ATDI ATDI	Tong ity, fiers fiers tauru 1:9913 drena: bda gt	rda hrt vir	CACCACAA
tard HMEE HHIE HILL KVSS ENQI FTWL LFIE OULTF VRC: VRC: TKIC TKIC TKIC TKIC TKIC TKIC TKIC TKIC	100 100 ms' 3"	ta, io	SOS SOS
RVG RYA SYLL KY. VAI LEH LEH CKP OTW PAT YCG STIJ	3 Zhu, 10900 us" 3" 3"	lac 195	
YQ YQ PEI LEI CLE KX KIN KIN KE KE KE KE KE KE KE KE KE KE KE KE KE		Chordata; Craniata; Cetartiodactyla; Rur .s. m bovine adrenal gla , 31-36 (1994)	HIIIIIII ACAGGGACC ACAGGGACC DICTTGAGG I I I I CAATAGAA, IIIIII I CAATAGGAC CAATAGGAC CAATAGGAC COmplete
DEV SEY SEY CLL SEQ DT1 DT1 DT1 DT1 DT1 DT1 DT1 DT1 DT1 DT1	Physiology Euclid Ave d" bovine adre	nia la; al	CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
YLL EV VVI VVI SSS SSE SSE SSE SSE	sic Lid		
ENI PPE PPE PO PO PO PO PO PO PO PO PO PO PO PO PO		ta; Vo Rumir gland	TC, SCAC
TLI HELE	logy Ave,	na,	AGG GC.
EAJ AVI OSN ERN PS' THU THU THU THU THU THU THU OGD OR AKI	Ave, Cl	a; Vertebra Ruminantia; gland	71 23 26 - 27 CC - 27
AFI ADT ADT ADT ADT FH LTF LTF VAL SA VAL KEP VAL KEP VAL KEP VAL KEP VAL KEP VAL KEP VAL KEP VAL KEP VAL KEP VAL KEP VAL VAL VAL VAL VAL VAL VAL VAL VAL VAL	d E	Vertebrata; minantia; Pe nnd	 CCCCC CCCCC NGGGCC. CCTGAGG CCAGAGG
ENI VYI I FR VYT VYT VKY VKY VKY VKY VKY VKY VKY VKY VKY VKY	Bịophy eveland	ta; Pe	CAC
COLUMN OF THE CO	phy and	O	3; 3; 3;
REDI NAI NAI NAI NAI NAI NAI NAI NAI NAI NA	7/Si 1,	a; Eute Pecora;	11 1 1 1 1 1 1 1 1 1
REA BRG GI LS SCEEN BRT FEA FOR FOR FOR FOR FOR FOR FOR FOR FOR FOR	OH OH		CAC CTA
ILI IDQ, EEG EEG IVA IVA RVI EEG EEG EEG EEG EEG EEG EEG EEG EEG EE	.: Са 441 9 by	ost	
/Product="myosin I" /Protein_id="AaA17565.1" /db_xref="Gi:436397" /translation="Mesaltardrygyopfyllenftseaafienlærerenlivty Isgesgagkteatrelogitsraphergryspyerlengavidlengargyspyerdengavidlengargyspyerdengavidlengargyspyerdengavidlengavidlengargyspyerdengavidlen	and Biophysics, Case, Cleveland; OH 44106, OH	Euteleostomi; Ora; Bovoidea	327] 3338 3331
	20.00	Heostomi; Bovoidea;	1 3271 FACC 3338 1111 FACC 3331
		•	9

	3CT 1062 3CT 1089	1003 AGGTACAACACTTAGGGAAGCCCTGACCCACAGGAAGATCATCGCCAAGGGGGGAAGAGG	Db Qy
	;A 1002 A 1029	943 CAATGCCCAGGTTACTACTGAGAACCAGCTCAAATATCTGACCAGGCTCCTTGGTGTGG 	Оу
	G 942 G 969	883 CAGCATCGTGGCCAGCGTCCTACATCTGGGCAACATCCACTTTGCTGCTGACGAGGACA	Дy
	T 882	823 GGTTATGAGGAAGGCGCTGTCCGTCATTGACTTCACTGAGGATGAAGTGGAGGACTTGC	Оу
	A 822 - A 849	763 GTACCTGGTGAAGGGCCAGTGTGCCAAGGTCTCCTCCATCAACGACAAGAGTGACTGGA 	Db Qy
	TT 762 CT 789	703 GGGGGCGAGGAGGAGACTCTCCGTCGGCTGGGCTTGGAACGGAACCCCCAGAGCTACT 	ру
	A 702 I A 729	643 CCGGGTGGTGCACCAAAATCACGGAGAGGCGGAACTTCCACGTCTTTTACCAGCTACTGG	Оу
	10 642 10 669	583 GTTTGACTTCAAGGGTGCCCCCGTGGGAGGCCACATTCTCAGTTACCTCCTGGAAAAGTC	Qy Db
	A 582 A 609	523 GAATGCCAAGACTCTCCGCAACGATAACTCCAGCCGGTTTGGAAAGTACATGGATGTGC	рb
	iG 522 549	463 ACGGGTGGCGAGTGCGAGACCGCCTGTTGCAGAGCAACCCCGTGTTAGAGGCCTTTG	Db Qy
	A 462 A 489	403 CAAGACAGAGGCCACCAAGAGACTGCTCCAGTTCTATGCAGAGAGACCTGCCCAGCCCCTG	Оy
	iG 402 429	343 GGCACTTCGTACTGAGCGTCGGGACCAGGCAGTGATGATTTCTGGAGAGAGTGGGGCAG 	Qу
	342 - G 369	283 TGGTGTCAGTTTCTATGAAGTACCACCTCATTTGTTTGCAGTGGCTGACACTGTATACCO	Оу
	309	223 CTCTGTCAATCCCTACCGAGACCTACAGATCTACAGCCGGCAGCATATGGAACGCTACC 	Дy
	T 222 249	163 GAACCTCCGGCGGCGGTTCCGGGAGAACCTCATTTATACCTACATCGGTCCTGTCCTAG	Оу
	A 162 A 189	103 GGTAGGGGTGCAGGACTTTGTCCTGCTGGAGAATTTCACCAGTGAGGCTGCCTTCATTG 	Qу
)G 102 +)G 129	43 GGCCCTGGGCAGTGACGGGGTTCGAGTGACCATGGAGAGCGCCTTGACTGCCCGAGACC	Qу
80	Gaps	very Match 70.9%; Score 2595.2; DB 4; Length 3505; est Local Similarity 86.3%; Pred. No. 0; atches 2960; Conservative 0; Mismatches 458; Indels 10;	Qu Be Ma

2 CACAGAGGACTCCCTGGAAGTCCGGCGGCAGAGTCTAGCCACCAAGATCCAGGCGGCCTG 2201	214	Qy
0 GGAAGAGTACAAGATGGGCAGGACCAAGATCTTCATCCGCTTCCCCCAAGACCCCTGTTTGC 2169	211	Дb
AAGAGTACAAAATGGGCAGGACTAAGATCTTCATCCGATTCCCCCAAGACCTTATT	208	Qy
	205	9g
CCGCAAATACGAGGCTTTCCTGCAGAGGTACAAGTCACTGTGCCCAGAGACATGGCCCAC 20	99) Db
	96	Qy
O GGTGAAGTACCTAGGGCTGATGGAGAGACCTGCGTGTGCGCAGAGCCGGCTTTGCCTACCG 198	193	Db
GTGAAGTACCTGGGACTGATGGAGAATCTGCGCGTGCGCAGAGCTGGCTTTTGCCTATC	190	Qy
0 CATCAAGCCCAATGACTCCAAGCAGCCCGGCCGCTTTGATGAGGTGCTAATCCGGCACCA .192	187	ДĎ
ATCAAGCCAAACGACGCCAAGCAGCCGGGTCGCTTTGATGAGGTGCTCATCCGACATC	184	Qy
0 GATGAGCCTCCTGGAGCTGGTAGAGATCTTGAAGTCAAAGGAGCCTGCCT	$\stackrel{\sim}{\vdash}$	дЬ
AGCCTCCTGCAGCTCGTGGAGATCCTGAGGTCTAAGGAGCCTGCCT		γQ
0 CTTCGACCGGAGTGAGCTCAGCAGCAAGAAGCGGCCAGAGACGGTGGCCACCCAGTTCAA 180	175	Db
GACAAGAGTGAGCTCAGTGACAAGAAGCGGCCAG-GACGGTGGCCACCCAGTTC	72	Qy
0 TCTCTTCCGGAACCTGAAGGAGCCATGTGCAGCTCGGAGAACCCCATCCTGGGCCAGTG 174	169	ДD
TCTTCCGGAACCTGAAGGAGACCATGTGCAGCTCAATGAACCCCATCATGGC	166	Qy
0 GCACTATGCCGGGGAGGTGACCTACAACGTGACCGGGTTTCTGGATAAAAACAACGACCT 168	163	. D
ATTATGCTGGAGAGGTGACCTACAGTGTGACTGGGTTTCTGGATAAAAACAATG	0	Qy
6	57	фd
aagctcgctgaccagaagaccaggaaatccctagaccgaggggagttccgcctt	154	Qγ
	151	ф
CTGACCTTTCTGGAGAAGTTGGAGGACACTGTCAAGCCCCACCCTCACTTCCTG	48	Qy
	145	ДD
ATCTTGGATGAAGAGTGCCTGCGTCCTGGGGAGGCC		Οу
0 CATCGCGTGGGAACCGGTCCAGTATTTCAACAACAAGATTATCTGTGACCTGGTGGAGGA 144	139	ДĎ
GCGTGGGAACCTGTCCAGTACTTCAACAACAAGATCATCTGTGACCTGGTAGAGG	36	Qy
0 ACAGCAGCTCTCATCGAGCTCACCCTCAAGTCAGAGCAGGAGGAGTATGAGGCCGAGGG 138	133	Дb
CAGCTCTTCATCGAGCTGACTCTCAAGTCGGAGCAGGAGGAATACGAGGCTC	130	Qγ
0 TGAAGTGTTCCAGCACAACAGCTTTGAGCAGTTCTGCATCAATTACTGCAATGAGAAGCT 132	127	Дb
GAAGTGTTTCAGCATAACAGCTTCGAGCAGTTCTGCATCAACTACTGCAATGAGAAG	124	Qy
0 TGCCGAGAGCCCCAGCTGGCGGAGCACCACCGTCCTCGGGCTACTGGGCATTTACGGCTT 126	121	Db
CTGAGAGCCCCAGCTGGCGAAGCACCACGGTTCTTGGGCTCCTGGACATTTACGGC	118	Qy
0 GTACAGTCGCACCTTTACCTGGCTGGTCGCGAAGATCAACAGGTCGCTGGCCTCCAAGGA 120	115	Db
TACAGCCGGACATTCACCTGGCTGGTCAGAAAGATCAATAGGTCACTGGCCTCTAAG	12	Qy
0 CCTGAGCCCGCTGAACCTAGAACAGGCTGCATATGCACGGGACGCCCTCGCCAAGGCTGT 114	109	Db
CCTGAGCCCACTGAACCTTGAACAGGCGGCATATGCAAGGGATGCGCTTGCCAAGGC	1063	ОУ

```
3221 GACTTACCAAAAACTCAAAGCTTCCAAAACAGGGATCCATGGACACCCTCAAAACCCACGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Б
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ő
                                                  3162 AAGGC-TGCGGTGGACCGCTGCTGACTCCTGATGCTTCCCTTAGTCCCCTCCTCCCCTCC 3220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                     3130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ъ
                                                                                                                                     3070 CGCAGGGGGGCCCGGCAGGGATGGCATCATTGACTTCACACCCGGCTCGGAGCTGCTCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                            3042
                                                                                                                                                                                               2982 GACGGCCCTCAGTGCTGACCGCGTGAACAATATCAACATCAACCAGGGCAGCATAACGTT 3041
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                    2950 CAATAAGCAGAAGGGGGACGTGGTGCTGCAGAGTGACCACGTGATCGAGACCCTGACCAA
                                                                                                                                                                                                                                                                                  2890 CGGAATCTCCGTCAGCAGCCTGAGCGACAGCCTCTTTGTGCTCCACGTGCAGCGTGAGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                2862 CGGAATCTCTGTCAGTAGCCTGAGTGATAGCCTATTTGTGCTTCACGTGCAGCGTGAAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Db
                                                                                                                                                                                                                                                                                                                                                                                          2802
                                                                                                                                                                                                                                                                                                                                                                                                                    2770
                                                                                                                                                                                                                                                                                                                                                                                                                                   2710 GATCAACCCCAGAGTGCTGCAGGCCCTGGGCTCGGAGCCCATCCAGTACGCCGTGCCCGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                2682 GATCAGCCCCAGAGTGCTTCAATCCTTGGGCTCTGAACCCATCCAGTATGCCGTGCCCGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2650
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2590 TGAATGGAAGCAGCTGCAGCAAAAGGCCGTTGCGAGTGAGATCTTCAAGGGCAAGAA
                                      AAGGCGCCAGCGGACCCCTCCCGCCTCCCAGTGCTTCGCTCA-TCCCCTCCCTCCCTTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2530 GCTGCTGCGGGAGCTGTGCCGGAAGAACATGGTGTGGAAATACTGCCGGAGCATCAGCCC
                                                                                      CACCAAGGCCAAGAACGGGCACCTGGCTGTGGTGGCCCCCGCGGCTGAACTCGCGGTGATG
                                                                                                  CACCAAGGCTAAGAATGGCCACCTGGCTGTGGTGGCCCCACGGCTGAATTCTCGGTGATG 3161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2502 ACTGCTACGGGAACTGTGCATGAAGAACATGGTGTGGAAGTACTGCCGGAGCATCAGCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2470
                                                                                                                                                   TGCAGGGGTCCAGGCAGGGACGGCATCATTGACTTCACATCGGGCTCAGAGCTTCTCAT 3101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2442
                                                                                                                                                                                  GACAGCCCTCAGCGCTGACCGAGTGAACAACATCAACATCAACCAGGGCAGCATCACGTT 3069
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2410
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2382
                                                                                                                                                                                                                                                CAACAAGCAGAAGGGAGATGTGGGTGCTGCAGAGTGATCATGTGATCGAGACACTAACCAA 2981
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2322 GACCATCCGTCGACTCCGTGGCTTCATTTTGCGCCATTCACCCCGGTGCCCTGAGAA 2381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2290
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2230
                                                                                                                                                                                                                                                                                                                                CGCCGTGGTCATTGTGGAGGACGCCAAGGTCAAGCAGAGGATTGAGTACACCAACCTGAC 2889
                                                                                                                                                                                                                                                                                                                                               TGCTGTGGTCATTGTGGAGGATGCTAAAGTCAAGCAGAGAATTGATTATGCCAACCTAAC 2861
                                                                                                                                                                                                                                                                                                                                                                                              GGTAAAATACGACCGTAAGGGTTACAAGCCTCGCCCCCGGCAGCTGCTGCTCACCCCCAG 2801
                                                                                                                                                                                                                                                                                                                                                                                   CGTGAĀGTĀCGĀCCGCĀĀGGGCTĀCĀĀGCCGCGCCCCGGCĀGCTGCTGCTGACGCCCĀĀ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GGACAATTACCCCCAGAGTGTCCCCCAGACTCTTCATCAGCACGCGGCTCGGTGCAGATGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGACAACTACCCCCAGAGTGTCCCCAGACTCTTCATTAGCACACGGCTTGGCACAGAGGA 2681
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGAGTGGAAGCAGCTGCAGCAAAAGGCGGTGGCTAGTGAAATTTTCAAGGGCAAGAA 2621
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CGGGAATGTTCTGGACACCTCCTGGCCCACACCCACCTGCCCTGAGAGAGGCCTCAGA 2501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TGCCTTCTTCGTGGACCATGTGCGCACCTCTTTTCTGCTCAACCTTCGACGGCAGCTGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGCCTTCTTGGACCACGTGCGCGCCTCATTTTTGCTTAACCTGAGGCGGCAACTGCC 2441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GACCATCCGGCGGCTCATCCAGGGCTTCATCCTGGGCCATGCGCCCGTTGCCCCTGAGAA 2409
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GTCATGGTGGCGTGGCACACTGGGCCGGAGGAAGGCAAGAGGGAAGTGGGCAGCCCA 2321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GTCGTGGTGGCGAGGAACGCTGGGCCGGAGGAAGGCGGCCAAGAGGGAAGTGGGCGCCACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GAGGGGCTTTCACTGCCGGCAGAAATTCCTCCGGGTGAAGCGATCAGCGATCTGCATCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GAGGGGCTTTCATTGGCGACAGAAATTTCTCCGGGGTGAAGCGATCAGCCATCTGTATCCA 2261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3280
                                                                                                                                                                                                                                                                                                            2921
                                                                                                                                                                                                                                                                                                                                                                                                                                   2769
                                                                                                                                                                                                                                                                                                                                                                                                                                                          2741
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    . 2709
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2649
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2589
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2561
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2229
```

Ś ₽

д δ В Ş В Ş Дb Š Ъ Ş В Qγ В Ş В δ д

```
REFERENCE
AUTHORS
TITLE
JOURNAL
MEDLINE
PUBMED
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMMENT
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 7
BTMYOIBA
LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ъ
                                                                                                                                                                                                                                                                                                                       CDS
                                                                                                                                                                                                                                                                                                                                                       exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3459
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3249 CAGCTACCAAAGACTCGAGCTTCCAGACAGG--ACCCAGGACACCTCGAAGCCCACCGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Submitted (26-MAY-1993) Reizes O., UT-Southwestern Medical Center, Pharmacology, 5323 Harry Hines Boulevard, Dallas, Texas, USA, 7520 Constitution/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukarych; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidae; Bovinae; Bos.

1 (bases 1 to 3148)

Reizes,0., Barylko,B., Li,C., Sudhof,T.C. and Albanesi,J.P.

Domain structure of a mammalian myosin I beta

Proc. Natl. Acad. Sci. U.S.A. 91 (14), 6349-6353 (1994)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GATTTTTT 3491
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            G-CCCTCTGCTGATGCCAAATATCTAAGACAAGGGAATTTTAACTGAGG-TTTTCTCTGA 3458
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Reizes, O.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GCCCCACTGCCAATGCCAAATATTTGAGAGAAGGGAACTTTTGCTGAGGTTTTTCTCTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GATTTTTT 3466
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGGAGT-GCCCAGCCGGCCACAGCAATAGGAAGAGCCGGGGCCAGAGGCAGCCGCCCCA 3423
         /Protein_id="CAA80476.1"
/Protein_id="CAA80476.1"
/BLAYEREMELY 208138"
/BLAYEREMELY 208138"
/BLAYEREMELY 208138"
/BLAYEREMELY 208138"
/CLEASIALTON="MESALTCDRYGYODFVLLENFTSEAAFIENLARRERENLIYTY
IGPULVSVNPYRDLOIY SKRHMERYRGYSFYEVPPHLFAVADTYYRALRTERRDQAVM
IGPULVSVNPYRDLOIY SKRHMERYRGYSFYEVPPHLFAVADTYYRALRTERRDQAVM
IGLERROSY LYLVKGQCAKVSSINDXSDWKVLKALTYLDFTEREDEDLSTVASV
RLGLERNQSY LYLVKGQCAKVSSINDXSDWKVVRKALTYLDFTEREDVEDLLSTVASV
RLGLERROSY LYLVKGQCAKVSSINDXSDWKVVRKALTYLDFTEREDVEDLLSTVASV
POHHSFEDPCINVCNEKLOOLFIERTALTRILORSSTIRARLTNRK I IAKGEELLSPL
KFRGIISILDECLRFGGETTWLVAXIKRSLASKDAESPSWRSTTVLGLDTYGFEV
LLHYAGEVTYNVTGFLDKNNDLLFIERKLEDTIKOHPHILHKLADQRTRKSLDRGEFR
TORKMEILFILDECLRFGGETDKNNDLLFRILKETWCSSEIPLLGGFFDRSELSDKKAPETYA
TORKMEILFILDECLRFGETDKNNDLLFRILKETWCSSEIPLLGGFFDRSELSDKKAPETYA
TORKMEILFILDECLRFGETDKNNDLLFRILKETWCSSEIPLLGGFFDRSELSDKKAPETYA
TORKMEILFILDECLRFGETDKNNDLLFRILKETWCSSEIPLLGGFFDRSELSDKKAPETYA
TORKMEILFILDECLRFGETDKNNDLLFRILKETWCSSEIPLGGFFDRSELSDKKAPETYA
TORKMEILFILDECLRFGETDKNNDLLFRILKETWCSSEIPLGGFFDRSELSDKKAPETYA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GCAAACTCCTGCCTTCTGCTCGCCCCCCTCTTGAGGTGATCAGGAGCCAGGGAGCTACCCC 3340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Bos taurus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             myosin IB.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         B. taurus myosin IB mRNA, complete CDS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              222852.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BTMYOIBA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (bases 1 to 3148)
TQFKMSLLELVETLKSKEPAYYRCIKPNDSKQPGRFDEVLIRHQVKYLGLMENLRVRR
                                                                                                                                                                                                                                                                                                               /note="j
31. .3]]
                                                                                                                                                                                                                                                                                                                                                         Dixon
                                                                                                                                                                                                                                                                                     /codon_start=1
                                                                                                                                                                                                                                                                                                                                                             /tissue_type="brain"
/clone_lib="lambda 2ap
                                                                                                                                                                                                                                                                                                                                                                                                 /organism="Bos taurus"
/db_xref="taxon:9913"
/clone="pbmib"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /organism="Bos taurus"
/db_xref="taxon:9913"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GI:397402
                                                                                                                                                                                                                                                                                                          e="1st coding exon".3117
                                                                                                                                                                                                                                                                                                                                            .156
                                                                                                                                                                                                                                                                                                                                          bovine brain cDNA library of Jack
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pecora; Bovoidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MAM 10-FEB-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3483
```

٠.

```
BASE CO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COUNT
                                                                                                     661
                                                                                                                                                     601
                                                                                                                                                                                                                                                       481
   781
                           824
                                                   721
                                                                          764
                                                                                                                            704
                                                                                                                                                                             644
                                                                                                                                                                                                      541
                                                                                                                                                                                                                              584
                                                                                                                                                                                                                                                                                524
                                                                                                                                                                                                                                                                                                       421
                                                                                                                                                                                                                                                                                                                                464
                                                                                                                                                                                                                                                                                                                                                        361
                                                                                                                                                                                                                                                                                                                                                                                  404
                                                                                                                                                                                                                                                                                                                                                                                                           301
                                                                                                                                                                                                                                                                                                                                                                                                                                   344
                                                                                                                                                                                                                                                                                                                                                                                                                                                            241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   284
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    224
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      164
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        44
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1
                                                TACCTGGTGAAGGGCCAGTGTGCCAAGGTCTCCTCCATCAACGACAAGAGTGACTGGAAG
                                                                                                   GGGGGCGAGGAGGAGACTCTCCGTCGGCTGGGCTTGGAACGGAACCCCCAGAGCTACTTG
                                                                                                                                                                 CGGGTGGTGCACCAAAATCACGGAGAGCGGAACTTCCACGTCTTTTACCAGCTACTGGAG
                                                                                                                                                                                                                                                    CGGGGTGGCGCAGTGCGAGACCGCCTGTTGCAGAGCCAACCCCGTGTTAGAGGCCCTTTGGG
                                                                                                                                                                                                                                                                                                                                                                                                        GGTGTCAGTTTCTATGAAGTACCACCTCATTTGTTTGCAGTGGCTGACACTGTATACCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AACCTCCGGCGGCGGTTCCGGGAGAACCTCATTTATACCTACATCGGTCCTGTCCTAGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GTAGGGGTGCAGGACTTTGTCCTGCTGGAGAATTTCACCAGTGAGGCTGCCTTCATTGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GCCCTGGGCAGTGACGGGGTGCGGGTCACCATGGAGAGCGCACTGACCTGCCGTGACCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GCCCTGGGCAGTGACGGGGTTCGAGTGACCATGGAGAGCGCCTTGACTGCCCGAGACCGG
TTTGACTTCAAGGGTGCCCCCGTGGGAGGCCACATTCTCAGTTACCTCCTGGAAAAGTCC
                                                                                                                                                                                                                                                                                                                                                      AAGACAGAGGCCACCAAGAGACTGCTCCAGTTCTATGCAGAGACCTGCCCAGCCCCTGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2763;
                                                                                                                                                   CGGGTGGTGCACCAGAATCACGGGGAGAGGAACTTCCACATCTTCTACCAGCTGCTGGAG
                                                                                                                                                                                                     TTTGACTTCAAGGGTGCCCCCGTGGGTGGCCACATCCTCAGTTACCTCCTGGAGAAGTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AACCTGCGACGGCGCTTCCGGGAGAACCTGATCTACACCTACATTGGCCCCCGTGCTGGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               699
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGFAYRRKYEAFLQRYKSLCPETWPTWTGRPQDGVTVLVRHLGYKPEEYKMGRTKIFI
REPKTLFATEDALEIRRQSLATKIQATWRAFHCRQKFLRLKRQAICIQSWWRGTLGRR
RAPKTLFATEDALEIRRQSLATKIQATWRAFHCRQKFLRLKRQLCDSWWRGTLGRR
KAAKRWAAQTIRRLIQGFILRHAPRCPENAFVDHVRTSFLLNLRRQLDFNSW
PTPPPALREASELLRELCRKNHYWRYCRSISPEWKQOLQOKAVASEIRGKKDNYPQS
VPRLFISTRLGADEINPRVLQALGSEPIQYAVPVVKYDRKGYKPRSRQLLLTPNAVVI
VEDAKVKQRIEYTNLTGISVSSLSDSJEVLHYQREDNNQKGDYVLQSDHVIETLTKTA
LSADKVNININOGSITFAGGPGRDGIIDFTPGSELLITKAKNGHLAVVAPRLNSR"
/note="2nd coding exon"
937 c 965 g 547 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            68.6%;
87.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 2511.2;
Pred. No. 0;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           § 2511.2
No. 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                383;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                              480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60
                                                                                                                                                                                                                                                     540
                                                                                                                                                                                                                                                                                                                                                                                  463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    283
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              120
  840
                                                 780
                                                                                                                                                     660
                                                                                                                                                                            703
                                                                                                                                                                                                     600
                                                                                                                                                                                                                            643
                                                                                                                                                                                                                                                                                                                                                         420
                                                                                                                                                                                                                                                                                                                                                                                                          360
                                                                                                                                                                                                                                                                                                                                                                                                                                 403
                                                                                                                                                                                                                                                                                                                                                                                                                                                            300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2
```

οy DЪ δõ 뫄 QΥ В Qy 뭥 QΥ 밁 Qy Вb δ 밁 δÃ 밁 δÃ Вb δÃ 밁 QΥ 밁 γo В Qy В Qy 망 δõ

884

AGCATCGTGGCCAGCGTCCTACATCTGGGCAACATCCACTTTGCTGCTGACGAGGACAGC

943

```
Вb
                                                                                                            ρ
                                                                                                                               Ъ
                                                                                                                                              Qy
                                                                                                                                                                                                                                                                                                                                                         Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      QΥ
         Qy
                           Вþ
                                      Qy
                                                           DЬ
                                                                         QΥ
                                                                                                                                                                В
                                                                                                                                                                               QY
                                                                                                                                                                                                   Ър
                                                                                                                                                                                                                20
                                                                                                                                                                                                                                     Вb
                                                                                                                                                                                                                                                    Qy
                                                                                                                                                                                                                                                                       Db
                                                                                                                                                                                                                                                                                      ρy
                                                                                                                                                                                                                                                                                                          Db
                                                                                                                                                                                                                                                                                                                       δÃ
                                                                                                                                                                                                                                                                                                                                           DЬ
                                                                                                                                                                                                                                                                                                                                                                            DЬ
                                                                                                                                                                                                                                                                                                                                                                                           Ωy
                                                                                                                                                                                                                                                                                                                                                                                                             Дb
                                                                                                                                                                                                                                                                                                                                                                                                                            Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                망
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ър
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DЪ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          B
                                                                                              1741
                                                                                                                1783
                                                                                                                                1681
                                                                                                                                                 1724
                                                                                                                                                                                                    1561
                                                                                                                                                                                                                                      1501
                                                                                                                                                                                                                                                                        1441
                                                                                                                                                                                                                                                                                         1484
                                                                                                                                                                                                                                                                                                           1381
                                                                                                                                                                                                                                                                                                                                            1321
                                                                                                                                                                                                                                                                                                                                                            1364
                                                                                                                                                                                                                                                                                                                                                                              1261
                                                                                                                                                                                                                                                                                                                                                                                                              1201
                                                                                                                                                                                                                                                                                                                                                                                                                                                 1141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1021
                                                                                                                                                                  1621
                                                                                                                                                                                                                    1604
                                                                                                                                                                                                                                                       1544
                                                                                                                                                                                                                                                                                                                           1424
                                                                                                                                                                                                                                                                                                                                                                                              1304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1064
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1004
                                                                                                                                                                                                                                                                                                                                                                                                                               1244
                            861
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          944
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            841
CGCAAATATGAGGCTTTCCTGCAGAGGTACAAGTCACTGTGCCCAGAGACATGGCCCATG
                                   GTGAAGTACCTGGGACTGATGGAGAATCTGCGCGTGCGCAGAGCTGGCTTTTGCCTATCGT
                                                                                                                              CACAAGCTGGCTGACCAGCGGACCAGGAAATCTCTGGACCGCGGGGAGTTCCGCCTCCTG
                                                                                                                                                                                                                                                                       GACCTGACCTTTCTGGAGAAGTTGGAGGACACTGTCAAGCCCCACCCTCACTTCCTGACG
                                                                                                                                                                                                                                                                                                                  AAGTTCAAGGGCATCATCTCCATCTTGGATGAAGAGTGCCTGCGTCCTGGGGAGGCCACG
                                                                                                                                                                                                                                                                                                                                                   ATCGCGTGGGAACCTGTCCAGTACTTCAACAACAAGATCATCTGTGACCTGGTAGAGGAG
                                                                                                                                                                                                                                                                                                                                                                            CTGAGCCCACTGAACCTTGAACAGGCGGCATATGCAAGGGATGCGCTTGCCAAGGCTGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGCTCAACGCTGCGGGAAGCCCTGACCAACAGGAAGATCATCGCCAAAGGGGAAGAGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGTACAACACTTAGGGAAGCCCTGACCCACAGGAAGATCATCGCCAAGGGGGAAGAGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AATGCCCAGGTTACTGAGAACCAGCTCAAATATCTGACCAGGCTCCTTGGTGTGGAA 1003
                                                                     ATCAAGCCAAACGACGCCAAGCAGCCGGTCGCTTTGATGAGGTGCTCATCCGACATCAG
                                                                                                       CACAAGCTCGCTGACCAGAAGACCAGGAAATCCCTAGACCGAGGGGAGTTCCGCCTTCTG
                                                                                                                                                                                                                                                                                                                                           ATCGCGTGGGAACCGGTCCAGTATTTCAACAACAAGATTATCTGTGACCTGGTGGAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TACAGCCGGACATTCACCTGGCTGGTCAGAAAGATCAATAGGTCACTGGCCTCTAAGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GTGAAGTACCTAGGGCTGATGGAGAACCTGCGTGTGCGCAGAGCCGGCTTTGCCTACCGC
                                                            ATCAAGCCCAATGACTCCAAGCAGCCCGGCCGCTTTGATGAGGTGCTAATCCGGCACCAG
                                                                                              AAGTTCAAAGGCATCATCTCCATTTTGGACGAGGAGTGTCTGCGTCCCGGGGAGGCCACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AACGCCCAGGTCACCACCGAGAACCAGCTCAAGTACCTGACCAGGCTCCTTGGTGTGGAA
                                                                                                                                                                                                                                                                                                                                                           1423
                                                                                                                                                                                                                                                                                                                                                                                                              1260
                                                                                                                                                                                                                                                                                                                                                                                                                               1303
                                                                                                                                                                                                                                                                                                                                                                                                                                                 1200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                1243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1063
                                                            1860
                                                                             1902
                                                                                              1800
                                                                                                              1842
                                                                                                                               1740
                                                                                                                                                1782
                                                                                                                                                                 1680
                                                                                                                                                                                 1723
                                                                                                                                                                                                   1620
                                                                                                                                                                                                                    1663
                                                                                                                                                                                                                                      1560
                                                                                                                                                                                                                                                       1603
                                                                                                                                                                                                                                                                        1500
                                                                                                                                                                                                                                                                                        1543
                                                                                                                                                                                                                                                                                                          1440
                                                                                                                                                                                                                                                                                                                          1483
                                                                                                                                                                                                                                                                                                                                           1380
                                                                                                                                                                                                                                                                                                                                                                             1320
                                                                                                                                                                                                                                                                                                                                                                                             1363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1020
         2022
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             900
```

```
2983 ACGGCCCTCAGTGCTGACCGCGTGAACAATATCAACATCAACCAGGGCAGCATAACGTTT 3042
2941 ACAGCCCTCAGCGCTGACCGAGTGAACAACATCAACATCAACCAGGGCAGCATAACGTTT 3042
2961 ACAGCCCTCAGCGCTGACCGAGTGAACAACATCAACATCAACCAGGCAGCATCACGTTC 3000
                                                                                                      2881 AATAAGCAGAAGGGGGACGTGGTGCTGCAGAGTGACCACGTGATCGAGACCCTGACCCAAG 2940
                                                                                                                   2923 AACAAGCAGAAGGGAGATGTGGTGGTGCAGAGTGATGATGTGATCGAGACACTAACCAAG 2982
                                                                                                                                                      2821 GGAATCTCCGTCAGCAGCCTGAGCGACAGCCTCTTTGTGCTCCACGTGCAGCGTGAGGAC 2880
                                                                                                                                                                      2863 GGAATCTCTGTCAGTAGCCTGAGTGATAGCCTATTTGTGCTTCACGTGCAGCGTGAAGAC 2922
                                                                                                                                                                                                         2761 ĠĊĊĠŦĊĠŦĊĀŤŦĠŦĠĠĀĠĠĀĊĠĊĊĀĀĠĠŦĊĀĀĠĊĀĠĀĠŖĀŦŦĊĀĠŦĀĊĀĊĊĀĀĊĊŦĠĀĊĊ 2820
                                                                                                                                                                                                                       2803 GCTGTGGTCATTGTGGAGGATGCTAAAGTCAAGCAGAGAATTGATTATGCCAACCTAACC 2862
                                                                                                                                                                                                                                                          2701 GTGAAGTACGACGGCAAGGGGTACAAGCCGGGGTCCCGGGCAGCTGCTGACGCCCAAC 2760
                                                                                                                                                                                                                                                                          2743 GTAAAATACGACGGTAAGGGGTTACAAGCCTGGCCCCGGGCAGCTGCTGCTCACGCCCAGT 2802
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DЬ
                                                                                                                                                                                                                                                                                                             2641 ATCANCCCCAGAGTGCTGCAGGCCCTGGGCTCGGAGCCCATCCAGTACGCCGTGCCCCGTC 2700
                                                                                                                                                                                                                                                                                                                            2683 ATCAGCCCCAGAGTGCTTCAATCCTTGGGCTCTGAACCCATCCAGTATGCCGTGCCCGTG 2742
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                2581 GACAATTACCCCCAGAGTGTCCCCCAGACTCTTCATCAGCACGCGGCTCGGTGCAGATGAG
                                                                                                                                                                                                                                                                                                                                                                              2623 GACAACTACCCCCAGAGTGTCCCCAGACTCTTCATTAGCACACGGCTTGGCACAGAGGAG 2682
                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2443 CGGAATGTTCTGGACACCTCCTGGCCCACACCCCCACCTGCCCTGAGAGAGGCCTCAGAA 2502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2341 GCTTCTTCGTGGACCATGTGCGCACCTCTTTTCTGCTCAACCTTCGACGGCAGCTGCCC 2400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2383 GCCTTCTTCTTGGACCACGTGCGCGCCTCATTTTGCTTAACCTGAGGCGGCAACTGCCC 2442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2323 ACCATCCGTCGACTCATCCGTGGCTTCATTTTGCGCCATTCACCCCGGTGCCCTGAGAAT 2382
2281 ACCATCCGGCGGCTCATCCAGGGCTTCATCCTGCGCCATGCGCCCGGTGCCCTGAGAAT 2382
2282 ACCATCCGGCGGCTCATCCAGGGCTTCATCCTGCGCCATGCGCCCCTTGCCCCTGAGAAT 2340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2221 TCGTGGTGGCGAGGAACGCTGGGCCGGAGGAAGGCGGCCAAGAGGAAGTGGGCACAG 2280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2263 TCATGGTGGCGTGGCACACTGGGCCGGAGGAAGGCAGCCAAGAGGAAGTGGGCAGCCCAG 2322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2143 ACAGAGGACTCCCTGGAAGTCCGGCGGCAGAGTCTAGCCACCAAGATCCAGGCGGCCTGG 2202
2101 ACAGAGGACGCCTTGGAGATCCGACGACGAGACCTGGCCTGG 2202
2101 ACAGAGGACGCCTTGGAGATCCGACGACACACGCCTGGCCACGAAGATCCAGGCCACCTGG 2160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2041 GAAGAGTACAAGATGGGCAGGACCAAGATCTTCATCGGCTTCCCCAAGACCCCTGTTTGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2083 GAAGACTACAAAATGGGCAGGACTAAGATCTTCATCCGCATTCCCCAAGACCTTATTTGCC 2142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1981 TĠĠAĊÁĠĠĀĊĠŦĊĊĊĠĠĠĀŤĠĠĠĠŦĠĀĊŦĠŦŦĊŦĠĠŤĊĀĠĠĊĀĊĊŦĠĠĠĊŤĀĊĀĀĠĊĊĠ 2040
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TGGGCAGGACGGCCCCAGGATGGTGTGGCCGTGTTGGTCAGACACCTCGGCTACAAGCCA 2082
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CGCAAATACGAGGCTTTCCTGCAGAGGTACAAGTCACTGTGCCCAGAGACATGGCCCACG 1980
                                                                                                                                                                                                                                                                                                                                                                  2640
                                                                ORI
                                 g o
```

Ş Д Ş В δ

В Ş дb δÃ

дb

Ş

δ

Д δ DЬ

ρy

Ф

Ъ Ş Д ő ЪЬ Ş В Ş В Ş В Ş DЪ

42 CGGCCCTGGGCAGTGACGGGGTTCGAGTGACCATGGAGAGCGCCTTGACTGCCCGAGACC 101

1;

₩.	OF PA						
Best Local Sir Matches 2437;	BASE COUNT	CDS	JOURNAL MEDLINE PUBMED FEATURES Sourc	REFERENCE AUTHORS TITLE	SOURCE ORGANIS REFERENCE AUTHORS TITLE JOURNAL	RESULT (MMMIB LOCUS DEFINITI ACCESSION VERSION KEYWORDS	ОУ ОУ ОБ
ich l Simij 437; c	(n		C DEF	NCE ORS	ORGANISM ORGANISM FERENCE AUTHORS TITLE TOURNAL	RESULT 8 MMMIB LOCUS DEFINITION ACCESSION VERSION VERSION KEYWORDS	3103 3061 3163 3121
Tech 31 Similarity 66.0%; Score 2417.6; DB 10; Length 2568; 2437; Conservative 0; Mismatches 14; Indels 1; Gaps CGGCCCTGGGCAGTGACGCCTTTTCC.	/product="myosin' 1 beta" /product="myosin' 1 beta" /product="myosin' 1 beta" /product="myosin' 1 beta" /db_xref="MGD:MG1:104961" /db_xref="MGD:MG1:106612" /db_xref="MGD:MG1:106612" /trans1ation="MESALTARDRYGVODFVLLENFTSEAAFIENLRGGFRENLIYTY ISGESGACKTEAATKRILGFYAETCPAPERGAVRDRILGSNPVLEAFGNAVT RIGHTNYGVEYPROLGIYRKKHMERYRGVSFYEVPPHLEAVADTVYRALKTERRDAVM RIGHTNYGVEYPROLGITURYLLEKSRVYHONGERNEHYFYOLLEGGEETLAF RREGKYHOVGFDFKGAAPVGGHILSYLLEKSRVYHONGERNEHYFYOLLEGGEETLAF RIGHTNYGVYLVKOQCAVYSINDKSDMKVMRKALSYIDFTEDVGDLLSIVAAV FOHNSTEOPECINYCNEKLOOLFTELTLKSEQESTTLREALTHREITAKDNS LHIGHIHFAADEDSNAQVTTENOKKLTHRLIGVESTTLREALTHREITAKDREFLAFON KEKGIISILDEGCINYCNEKLOOLFTELTLKSEQESTELASFORMSTTYVIGLLDIYGFEY KEKGIISILDEGCLREGEATDLTFLEKLEDTVKPHHFTHFHALADOKTRKILDIYGFEY LLHAGSYTSYTGFLDKNODLLFRNIKETMCSSMMYIMAQCFDKSELSOKKRESTV FOHNSTLLQVETLERSEPAY IRG IKPMDAKOPGREDEVLIRHOVKYLGLMEHURVR RAKRKBAQTIELLRSEPAY IRG IKPMDAKOPGREDEVLIRHOVKYLGLMEHURVR RAKRKMAQOTIERLIRKSLATKIOAAMRGREDDOVALVHHLIGYKPEEKKMGRTKIFI PTPPALRO" ARFRYLFATEDSLEVRRESLATKIOAAMRGFHDWARSFLLNUGRQUPRNVLDTSW 710 c 751 g 514 t	J. 2568 /Organism="Mus musculus" /strain="BALB/c" /db_xref="taxon:10090" /tissue_type="cochlea" /dev_stage="adult" 147. >2568	ξ. 2	1996) F. Crozet, Inst. Pasteur, Unite de IIS, cedex 15, FRANCE A.E., Blanchard, S., Lenoir, M., Ripoll, C., Pujol, R. and Perit S. Depetris, D., Pujol, R. and Perit S.	Mus musculus Mus musculus Mus musculus Mus musculus Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; 1 (bases 1 to 2568) Crozet, F. Direct Submission Submission	MMMIB N M.musculus mRNA for myosin-I beta. mRNA linear ROD X99638	ACCAAGGCTAAGAATGGCCACCTGGCTGTGGTGGCCCCACGGCTGAATTCTCGGTGATGA ACCAAGGCCAAGAACACGGCACCAAGGCTGAATTCTCGGTGATGA ACCAAGGCCAAGAACACGGCACCTGGCTGTGTGGTGGCCCCCGCGGCTGAACTCGCGGTGATGA AGGC-TGCGGTGGACCGCTCCTGACTCC 3189 AGGCGCCCAGCGGACCCCCTCCCGCCTCC 3148
	Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z			Docteur ,	omi; Mus.	03-APR-1997	3162 3120

2215 2201 2275	рь Оу рь	Db 1135 TCCTGAGCCCACTGAACCTTGAACAGGCGGCATATGCAAAGGGATGCGCCTTGCCAAGGCTG 1194 Qy 1122 TGTACAGCCGGACATTCACCTGGCTGGTCAGAAAGATCAATAGGTCACTGGCCTCTAAGG 1181 [ю <u>р</u>
2141 CCACAGAGGACTCCCTGGAAGTCCGGCGGCAGAGTCTAGCCACCAAGATCCAGGCGGCCT		Qy 1062 TCCTGAGCCCACTGAACCTTGAACAGGGGGCATGTGCAAGGGGGGAAGAGC 1121	.o <u>t</u>
2081 CAGAAGAGTACAAAATGGGCAGGACTAAGATCTTCATCCGGATTCCCCCAAGACCTTATTTG	Qy	1002 AAGGTACAACACTTAGGGAAGCCCTGACCCACAGGAAGATCATCGCCAAGGGGGAAGAGC	2 .0
2021 TGTGGGCAGGACGGCCCCAGGATGGTGTGGCCGTGTTGGTCAGACACCTCGGCTACAAGC	Qy Db		D 8
1961 GTCGCAAATATGAGGCTTTCCTGCAGAGGTACAAGTCACTGTGCCCAGAGACATGGCCCA 	Оу	Qy 882 TCAGCATCGTGGCCAGCGTCCTACATCTGGGCAACATCCACTTTGCTGACGAGGAGACA 941	5 S
1901_AGGTGAAGTACCTGGGACTGATGGAGAATCTGCGCGTGCCCAGAGCTGGCTTTGCCTATC 	Qy Db	Qy 822 AGGTTATGAGGAAGGGCGCTGTCCGTCATTGACTTCACTGAGGATGAAGTGGAGGACTTGC 881	₽ <i>Q</i>
	Qy Db	Oy 762 TGTACCTGGTGAAGGGCCAGTGTGCCAAGGTCTCCCTCCATCAACGACAAGAGTGACTGGA 821 Db 835 TGTACCTGGTGAAGGGCCAGTGTGCCAAGGTCTCCTCCATCAACGACAAGAGTGACTGGA 894	B 8
1781 AGATGAGCCTCCTGCAGCTCCTGGAGATCCTGAGGTCTAAGGAGCCTGCCT	ОУ	Qy 702 AGGGGGCGAGGAGAACTCTCCGTCGGCTGGGCTTGGAACGGAACCCCCAGAGCTACT 761	₽ Q
	90 Vy	Qy 642 CCCGGGTGGTGCACCAAAATCACGGAGAGCGGAACTTCCACGTCTTTTACCAGCTACTGG 701	р 0 2
735	QY Db	QY 582 AGTTTGACTTCAAGGGTGCCCCCGTGGGAGGCCACATTCTCAGTTACCTCCTGGAAAAGT 641 Db 655 AGTTTGACTTCAAGGGTGCCCCTGTGGGTGGCCACATCCTCAGTTACCTCCTGGAAAAGT 714	₽ S
5 8	Qу	Qy 522 GGAATGCCAAGACTCTCCGCAACGATAACTCCAGCCGGTTTGGAAAGTACATGGATGTGC 581 Db 595 GGAATGCCAAGACTCTCCGCAACGATAACTCCAGCCGGTTTGGAAAGTACATGGATGTGC 654	p 9
	Qу	QY 462 AACGGGGTGGCGCAGTGCGAGACCGCCTGTTGCAGAGCAACCCCCGTGTTAGAGGGCCTTTG 521	ğ 8
	Оу	QY 402 GCAAGACAGAGGCCACCAAGAGACTGCTCCAGTTCTATGCAGAGAGACTGCCCAGCCCCTG 461	B 8
	ДУ	Qy 342 GGGCACTTCGTACTGAGCGTCGGGACCAGGCAGTGATTGTTCTGGAGAAGTGGGGCAG 401	D 0
5 2	ОУ	Qy 282 GTGGTGTCAGTTTCTATGAAGTAACCACCTCATTTGTTTG	₽ <i>S</i>
130Z TGCAGCAGCTCTTCATCGAGCTGAGCTCCAAGTCGGAGCAGGAGTACGAGGCTGAGG 	90 An	Qy 222 TCTCTGTCAATCCCTACCGAGACCTACAGATCTACAGCCGGCAGCATATGGAACGCTACC 281	B 8
	Qy Db	QY 162 AGAACCTCCGGCGGGGGTTCCGGGGAGAACCTCATTTATACCTACATCGGTCCTGTCCTAG 221 Db 235 AGAACCTCCGGGGGGGGGGTTCCGGGGAGAACCTCATTTATACCTACATCGGTCCTGTCCTAG 294	₽ <i>Q</i>
. O K	Db Qy	Qy 102 GGGTAGGGGTGCAGGACTTTGTCCTGCTGGAGAAATTTCACCAGTGAGGCTGCCTTCATTG 161	E 8
	מם	Db 115 CGGCCCTGGGCAGTGACGGGGTTCGAGTGACCATGGAGAGCGCCTTGACTGCCCGAGACC 174	D.

Indels Length 3288;

1;

```
2261 AGTCATGGTGGCGTGGCCACACTGGGCCGGAGGAAGGCAAGCCAAGAGGAAGTGGGCAGCCC 2320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Submitted (05-SEP-1994) David P. Hospital, Boston, MA 02114, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCCGGAATGTTCTGGACACCTCCTGGCCCACACCCCCACCTGCCCTGAGAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCCGGAATGTTCTGGACACCTCCTGGCCCACACCCCCCACCTGCCCTGAGAGA 2492
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  l (bases 1 to 3288)
Solc,C.F., Derfler,B.H., Duyk,G.M. and Corey,D.P.
Molecular cloning of myosins from the bullfrog saccular macula:
Candidate for the hair-cell adaptation motor
Aud. Neurosci. 1, 63-75 (1994)
Coron, S. 1 to 3288)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AGACCATCCGTCGACTCATCCGTGGCTTCATTTTGGGCCATTCACCCCGGTGCCCTGAGA 2380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Rana catesbelana
Rana catesbelana
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
Amphibia; Batrachia; Anura; Neobatrachia; Ranoidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AGACCATCCGTCGACTCATCCGTGGCTTCATTTTGCGCCATTCACCCCGGTGCCCTGAGA 2454
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGTCATGGTGGCGTGGCACACTGGGCCGGAGGAAGGCAAGCCAAGAGGGAAGTGGGCAGCCC
                                                                                                                        /TEASIALLION-"MESALTARDRYGYODEFYLLENYTSEAAFIENLRKREKENLTYTY
IGSVLVSVNPYKELELYSKOHMERYRGVSEYEVSPHYALADNSYRSLATERKDOCIL
ISGESGAGKTEASKKILQYYAVTGPYSDQVETYKORLLOSNPYLEAFGNAKTLRNDNS
RFCKYMDVOFDYKOLDYYAVTGPYSDQVETYKORLLOSNPYLEAFGNAKTLRNDNS
RFCKYMDVOFDYKOAPVGGHILNYLLEKSRYVHONHGERNEHIEYQLLEGGEEDLLR
RLGLDKNAQNYQYLIKGQCARVSSINDKNDWKYVARLSIINFNDDJLEELLSIVASY
LHLGANVOFATDEHCHAQVTTENOLKYLARLLSVDSTYLLEESLIKKKILAKGEEINSPL
KFKGISILDSECLREKLOOLEFIELTIKSEQDEYESBGIAWEPYQYFNNKIJCDLYEF
YOHNSFEGPCINFCNEKLOOLFIELTIKSEQDEYESBGIAWEPYQYFNNKIJCDLYEF
TOFKNSLSKLWEILMSKOPSYVFCIKNDAKOPARFDEYLIRHOVKYLGRIEFR
AGFAYRRKYEIFLORYKSLCEDTWPNNDGRAMDGVAVLVKSIGKYR PEEYKMFETA
RAGFAYRRKYEIFLORYKSLCEDTWPNNDGRAMDGVAVLVKSIGKYR PEEYKMFETAR
KAAKRWADJVVRFETKGFIYRNOPRCTENBYFLDYIRYSELTUKROPKSVLDKSW
VERAKHKONDLAFNNAKYCRALNPEWROOLEOKVASIEKYR PROPESTRAFTIOR
PVPPSIKREASELLREMCMNNWWKYCRRINPEWROOLEOKVASIEKYR PROPESTRAFTIOR
PVPRSIKREASELLREMCNNNWWKYCRRINPEWROOLEOKVASIEKYR RRODLLITONARYL
TTARKTULGNDEITMTLOOLESGTITORWYWKYDRAYRRRRRAFTORALLTONARYL
TTARKTULGNDEITMTLOOLESGTITORWYWKYGRAYRRRRRAFTORALTONARYL
TTARKTULGNDEITMTLOOLESGTITORWYWKYGRAYRRRRRAFTORALTONARYL
TTARKTULGNDEITMTLOOLESGTITORWYWKYGRAYRRRRRAFTORALTONARYL
TTARKTUNTUTNORSTKETTORGACETTTORTAGGETTTARVANDORDHYIETTLTKVA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Rana catesbeiana.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           U14382.1 GI:603691
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Rana catesbeiana myosin
U14382
                                                                                  Ø
                                                     /note="3 tandem IleGIn motifs; encodes binding domains" 667 c 777 g 835 t
                                                                                                                   ITABERINNININGGSIKETVGPGKEGIIDETAGSELLIAKAKNGHLSVVAPRLNSR«
2161. 2367
                                                                                                                                                                                                                                                                                                                                                                                                                               /product="myosin I beta"
/protein_id="AAA65091.1"
/db_xref="GI:603692"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /organism="Rana catesbeiana"
/db_xref="taxon:8400"
/tissue_type="kidney"
/dev_stage="adult"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   'codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3288 b
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      đđ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             P mRNA lir
mRNA, complete
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Corey, Massachusetts General
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           linear
ete cds,
                                                                                      putative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Euteleostomi;
Ranidae; Rana
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2566
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VRT 18-APR-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2440
                                                                    Q
                                                                                                        Ъ
                                                                                                                                   δÃ
                                                                                                                                                                       Дb
                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                      DЬ
                                                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                                      DЬ
                                                                                                                                                                                                                                                                                                                                 Qy
                                                                                                                                                                                                                                                                                                                                                                   DЬ
                                                                                                                                                                                                                                                                                                                                                                                              Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                  B
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DЪ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ДĎ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ΩV
966 TTAAATACCTCGCCAGGCTCCTCTGTAGACTCTACTGTACTACGGGAGTCTCTCATTC
                                                                    972
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DЪ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              γQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                  912 GCAACATCCACTTTGCTGCTGACGAGGACAGGCAATGCCCAGGTTACTACTGAGAACCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                     846
                                                                                                                                                                                            786 TTAGCTCAATCAATGATAAAAATGACTGGAAGGTTGTTAGGCGAGCCTTGTCAATTATAA 845
                                                                                                                                                                                                                                                                    792
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORIGIN
                                                                                                                                                                                                                                                                               732 TGGGCTTGGAACGGAACCCCCAGAGCTACTTGTACCTGGTGAAGGGCCAGTGTGCCAAGG 791
                                                                                                                                                                                                                                                                                                                              666 GAAACTTCCATATTTTTTACCAGCTTCTTGAGGGTGGAGAAGAGGATTTGCTACGGAGGG
                                                                                                                                                                                                                                                                                                                                                672 GGAACTTCCACGTCTTTTACCAGCTACTGGAGGGGGGCGAGGAGGAGGAGACTCTCCGTCGGC
                                                                                                                                                                                                                                                                                                                                                                                                           612 GCCACATTCTCAGTTACCTCCTGGAAAAGTCCCGGGTGGTGCACCAAAATCACGGAGAGC 671
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match 47.1%;
Best Local Similarity 71.8%;
Matches 2270; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     486 TGCAGTCCAATCCTGTTTTGGAGGCATTTGGCAAATGCAAAAACCTTACGAAATGATAATT 545
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           492 TGCAGAGGCAACCCCGTGTTAGAGGCCCTTTGGGAATGCCAAGACTCTCCGCGAACGATAACT
                 TCAAATATCTGAGCAGGCTCCTTGGTGTGGAAGGTACAACACTTAGGGAAGCCCTGACCC 1031
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          432 AGTTCTATGCAGAGACCTGCCCAGCCCCTGAACGGGGTGGGGCGAGTGCGAGACCGCCTGT 491
                                                             GAAATGTGCAGTTTGCCACAGATGAGCATGGACATGCCCAAGTCACAACAGAAAACCAGA 965
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   366 GTATTCTTATATCTGGTGAGAGTGGGGCTGGGAAGACTGAGGCCAGCAAGAAATCCTAC 425
                                                                                                                                               ACTTCACTGAGGATGAAGTGGAGGACTTGCTCAGCATCGTGGCCAGCGTCCTACATCTGG 911
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  312 ATTTGTTTGCAGTGGCTGACACTGTATACCGGGCACTTCGTACTGAGCGTCGGGACCAGG
                                                                                                                               ACTTCAATGATGATGATATAGAGGAATTGCTGAGCATTGTTGCTAGTGTACTACATTTGG
                                                                                                                                                                                                                  TCTCCTCCATCAACGACAAGAGTGACTGGAAGGTTATGAGGAAGGCGCTGTCCGTCATTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     252 TCTACAGCCGGCAGCATATGGAACGCTACGGTGGTGTCAGGTTTCTATGAAGTACCACCTC 311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              186 TCATATATACGTACATTGGGTCAGTCTTGGTATCTGTCAATCCTTACAAAGAGTTAGAGA 245
                                                                                                                                                                                                                                                               TGGGGCTGGATAAAAATGCCCAAAATTACCAGTACTTGATTAAGGGTCAGTGTGCCAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  132 AGAATTTCACCAGTGAGGCTGCCTTCATTGAGAACCTCCGGCGGCGGCGGTTCCGGGAGAACC 191
                                                                                                                                                                                                                                                                                                                                                                                           GACATATTTTAAACTATCTCTTGGAAAAGTCCCGTGTGGTACATCAGAACCACGGAGAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CCAGCCGGTTTGGAAAGTACATGGATGTGCAGTTTTGACTTCAAGGGTGCCCCCGTGGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                          CCAGCCGCTTCGGAAAATATATGGATGTGCAATTTGATTACAAGGGAGCTCCTGTCGGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGTACTATGCTGTGACGTGTCCTGTCAGTGACCAGGTGGAGACTGTGAAAGACCGACTTC 485
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                12 CCGGGTCCGGCAGGATGCGCTACCGGGCATTCGGCCAGTGACGGGGTTCGAGTGA 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TCATTTATACCTACATCGGTCCTGTCCTAGTCTCTGTCAATCCCTACCGAGACCTACAGA 251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAAACTACACCAGTGAAGCTGCATTTATAGAAAACCTGAGGAAGCGATTTAAAGAAAATC 185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCCGGTGGAGTCGCATAGTGGGCAGCGTTCAGGCTCCAGCAATCGACGGGATCCGAATAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 1724.4; DB 5;
Pred. No. 0;
0; Mismatches 891;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 5;
```

JOURNAL REFERENCE AUTHORS TITLE

AUTHORS

TITLE

SOURCE

KEYWORDS VERSION ACCESSION

LOCUS DEFINITION RESULT 9 RCU14382

밁 Ş В

2515 2441 2455 2381 2395 2321

Ş дb Ş В Ş

FEATURES

source

JOURNAL

BASE COUNT

1009

misc_feature

905

785

731 665

611

305

2110 2105	GACTAAGA GACAAAGA	Db Qy
2050 2045	1991 ACAAGTCACTGTGCCCAGAGACATGGCCCATGTGGGCAGGACGGCCCCAGGATGGTGTGG :	Оy
1990 1985	1931 TGCGCGTGCGCAGAGCTGGCTTTGCCTATCGTCGCAAATATGAGGCTTTTCCTGCAGAGGT	Db Qy
1930 1925	1871 GTCGCTTTGATGAGGTGCTCATCCGACATCAGGTGAAGTACCTGGGACTGATGAAATC	D Qy
1870 1865	1811 TGAGGTCTAAGGAGCCTGCCTATATCCGGTGCATCAAGCCAAACGACGCCAAGCAGCCGG	Оу
1810 1805	1752 AGCGGCCAG-GACGGTGGCCACCCAGTTCAAGATGAGCCTCCTGCAGCTCGTGGAGATCC	Qу
1751 1745	692 GCAGCTCAATGAACCCCATCATGGCCCAGTGCTTTGACAAGAGTGAGT	Ωу
1691 1685	1632 TGACTGGGTTTCTGGATAAAACAATGACCTCCTCTTCCGGAACCTGAAGGAGACCATGT	Оy
1631 1625	1572 AATCCCTAGACCGAGGGGAGTTCCGCCTTCTGCATTATGCTGGAGAGGTGACCTACAGTG	Db Qy
1571 1565	1512 ACACTGTCAAGCCCCACCCTCACTTCCTGACGCACAAGCTCGCTGACCAGAAGACCAGGA	ρβ
1511 1505	1452 ATGAAGAGTGCCTGCGTCCTGGGGAGGCCACGGACCTGACCTTTCTGGAGAGTTGGAGG :	рь
1451 1445	392 ACAACAAGATCATCTGTGACCTGGTAGAGGGAGAAGTTCAAGGGCATCATCTCCATCTTGG	Ωу
1391 1385	1332 AGTCGGAGCAGGAGGAATACGAGGCTGAGGGCATCGCGTGGGAACCTGTCCAGTACTTCA:	Db .
1331 1325	1272 AGTTCTGCATCAACTACTGCAATGAGAAGCTGCAGCAGCTCTTCATCGAGCTGACTCTÇA :	Оy
1271 1265	12 - 12	Оу
1211 1205	1152 GAAAGATCAATAGGTCACTGGCCTCTAAGGACGCTGAGAGCCCCAGCTGGCGAAGCACCA	Оy
1151 1145	1092 CATATGCAAGGGATGCGCTTGCCAAGGCTGTGTACAGCCGGACATTCACCTGGCTGG	Оу
1091 1085	1032 ACAGGAAGATCATCGCCAAGGGGGGAAGAGCTCCTGGAGCCCACTGAACCTTGAACAGGCGG :	Д

3131 TGGTGGCCCCACGGCTGAATTCTCGGTGATGAAGGCTGCGGT 3172	Qy Db
σ -	Db
006 ATATCAACATTAATCAGGGCAGCATCAAGTTTACAGTTAGCAAGGTCAAGGAATGAAGGAATCA 3	2 B 2
951 AGAGTGATCATGTGATGGAGACACTAACCAGAGGGCCCTGAGTGGTGACGGCGTGAACA 301 914 III IIII II III II II I	B 8
891 GCCTAPTTGTGCTTCAGGTGCAGGGAGGACACAAGCAGAGGGAGGTGGTGCTGC 2	ob Qy
831 TCAAGCAGAGAATTGATTATGCCAACCTAACCGGAATCTCTGTCAGTAGCCTGAGTGATA 28 	Qy Db
2771 CTCGCCCCGGCAGCTGCTGCTCACGCCCAGTGCTGGTGGTCATTGTGGAGGATGCTAAAG 2830	Db Qy
2711 GCTCTGAACCCATCCAGTATGCCGTGCCCGTGGTAAAATACGACCGTAAGGGTTACAAGC 2770	ОУ
651 TCTTCATTACCACACGCCTTGGCACAGAGGAGATCAGCCCCAGAGTGCTTCAATCCTTGG 27	Db Qy
591 CGGTGGCTAGTGAAATTTTCAAGGGCAAGAAGGACAACTACCCCCAGAGTGTCCCCCAGAC 26	Оу
2531 TGGTGTGGAAGTACTGCCGGAGCATCAGCCCTGAGTGGAAGCAGCAGCTGCAGCAAAAGG 2590	ОУ
	ОУ
2411 CATTTTTGCTTAACCTGAGGCGGCAACTGCCCCGGAATGTTCTGGACACCTCCTGGCCCA 2470	Оy
2351 TTTTGCGCCATTCACCCCGGTGCCCTGAGAATGCCTTCTTCTTGGACCACGTGCGCGCCT 2410	Db Qy
2291 GGAAGGCAAGAGGAAGTGGGCAGCCCAGACCATCCGTCGACTCATCCGTGGCTTCA 2350	Оу
2231 TCCGGGTGAAGCGATCAGCCATCTGTATCCAGTCATGGTGGCGTGGCACACTGGGGCGGA 2290	Оy
2171 AGAGTCTAGCCACCAAGATCCAGGCGGGCCTGGAGGGGCTTTCATTGGCGACAGAAATTTC 2230	Qy Db
2111 TCTTCATCCGATTCCCCAAGACCTTATTTGCCACAGAGGACTCCCTGGAAGTCCGGCGGC 2170	Оу

```
Query Match
Best Local Similarity /0.0
7269; Conservative
                                                                                 72 CCATGGAGAGCGCCTTGACTGCCCGAGACCGGGTAGGGGTGCAGGACTTTGTCCTGCTGG 131
                                                                                                                                                 12 CCGGGTCGGGAGGATGGGCTACCGGGCATCGGGCATGGGCAGTGACGGGGTTCGAGTGA 71
                                                                CCATGGAGAGTGCCTTAACAGCCCGAGATCGGGTTGGTGTCCAGGACTTTGTCCTGCTGG
                                                                                                                            CCCGGTGGAGTCGCATAGTGGGCAGCGTTCAGGCTCCAGCAATCGACGGGATCCGAATAA 111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Direct Submission
Submitted (08-SEP-1994) Anne B. Metcalf, Cell
Neuroscience, University of Texas, 5323 Harry
TX 75235, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Metcalf, A.B. 2452)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 (bases 1 to 3452)

Metcalf, A.B., Chelliah, Y. and Hudspeth, A.J.

Molecular cloning of a myosin I beta isozyme that may mediate adaptation by hair cells of the bullfrog's internal ear proc. Natl. Acad. Sci. U.S.A. 91 (25), 11821-11825 (1994)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi, Amphibia; Batrachia; Anura; Neobatrachia; Ranoidea; Ranidae; Rana;
                                                                                                                                                                                                                                                                         IGSVUSYNPYK ELEITYSOHMERYGVDFVLLENYTSEAAFIENLRKRFKENLIYTY

ISGESCAGKTEASKKILQYYANTCEPVSDQVETVKDRLLANDNSYRSLRTEKDDCIL

SREGKYMDVGFDYKGAPVGGHILNYLLEKSRYVHONHGERNEHITYQLLEGGEEDLIR

RIGLDKNAQNYOLIKGGCARVSSINKKURVYRRALSIINENDDDIEELLSIVASV

RILDAWQAPATDEHGHAQVTTENQIKYLARLISVDSTVLRESLIHKNILAKGEELNSPL

KRIGINKIARANAYOLITSECARYSINKKUWRAVRRALSIINENDDDIEELLSIVASV

FOHNSFEQFCINGENCHOQLEIELTIKSEDDEVERSECIAMBEVQYFNNKIICDLYEE

LHYAGEWYSVAGFLDKNNDLLFRHLKEVMDSVETSECIAMBEVQYFNNKIICDLYEE

LLHYAGEWYSVAGFLDKNNDLLFRHLKEVMDDSGNPIAHQCENSELIDKKRETAA

REPATLEATEDALEWKRDFSYVECIKNDDAGCDSWFSTEGLAKBELTDKKRETAA

REPATLEATEDALEWKHISLATTLOARWRGYROPDLYLHHOOKTKVLGRDEER

AGENYRKKEIFLORKSCOTTWANDAGCARFDDEVLITAHOVKYLGLIENVRVER

KAAKRKWAVDVVRREIGFTURANDRGRANDGVALLTHOVKYLGLIENVRVER

KAAKRKWAVDVVRREIGFTUROPROTENEYFLDYIRVSLIFKDKOKDNYDS

VERLFINTRLGNDEITYKILOQLESGOTLTVAVPVVKYDRKSYVARROLLTONASYL

VERLFINTRLGNDEITYKILOQLESGOTLTVAVPVVKYDRKSYKPRROLLLTONASYL

VERLKINGGSIKFTVGPGKEGIIDFTAGSELLIAKAKNGHLSVVAAPRLINSR*

17AEKINININGSSKFTYGPGKEGIIDFTAGSELLIAKAKNGHLSVVAPRLINSR*

895 c

821 9

80 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 U14549.1 GI:602137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Rana catesbeiana
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      catesbelana
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          .catesbeiana myosin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /Product="myosin I beta"
/protein_id="AAA57192.1"
/db_xxef="GI:602138"
/tanslation="MESALTARDRVGVQDEVLLENYTSEAAFIENLRKREKENLIYTY
Town Varianus Productions (MESALTARDRVGVQDEVLLENYTSEAAFIENLRKREKENLIYTY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /standard_name="amphibian myosin I beta"
/note="partially processed transcript"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Join(114. 2029,2110. 3280)

'gene="AMI beta"

join(114. 2029,2110. 3280)

'gene="AMI beta"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /tissue_type="brain"
join(114. .2029,2110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /organism="Rana catesbeiana"
/db_xref="taxon:8400"
                                                                                                                                                                                                                               44.68;
70.08;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Location/Qualifiers
1. .3452
                                                                                                                                                                                                     Score 1632.8; DB 5;
Pred. No. 0;
0; Mismatches 892;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3452 bp
1 I beta
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ďq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (AMI beta) mRNA,
                                                                                                                                                                                                                                      DB 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      mRNA
                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                               Length 3452;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          l Biology and
Y Hines Blvd,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            complete
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VRT 14-DEC-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Dallas,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            cds
                                                                                                                                                                                           2;
                                                                       В
                                                                                                  γ
                                                                                                                                   В
                                                                                                                                                               ρ
                                                                                                                                                                                                  DЬ
                                                                                                                                                                                                                              QΥ
                                                                                                                                                                                                                                                             DЬ
                                                                                                                                                                                                                                                                                         Qγ
                                                                                                                                                                                                                                                                                                                        Д
                                                                                                                                                                                                                                                                                                                                                    Qγ
                                                                                                                                                                                                                                                                                                                                                                                     Д
                                                                                                                                                                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Д
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            γQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DЪ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DЪ
1212 CGGTTCTTGGGCTCCTGGACATTTACGGCTTTGAAGTGTTTCAGCATAACAGCTTCGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           QY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DЪ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Qγ
                                                                   1192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      γQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DЬ
                                                                                                                                                                             1032 ACAGGAAGATCATCGCCAAGGGGGAAGAGCTCCTGAGCCCCACTGAACCTTGAACAGGCGG 1091
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                 1092
                                                                                                                                                                                                                                                         1012
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Qy
                                                                                                                                                                                                                                                                                                       912 GCAACATCCACTTTGCTGCTGACGAGGACAGGAATGCCCAGGTTACTACTGAGAACCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                832
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             792
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  732 TGGGCTTGGAACGGAACCCCCAGAGCTACTTGTACCTGGTGAAGGGCCAGTGTGCCAAGG 791
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      712 GAAACTTCCATATTTTTTACCAGCTTCTTGAGGGTGGAGAAGAGGATTTGCTACGGAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCAAGATTAACAAATCTCTGGCATACAAGGGTACAGATATGCACAAGCTTGGGAGCGCAT
                                                       GAAAGATCAATAGGTCACTGGCCTCTAAGGACGCTGAGAGCCCCAGCTGGCGAAGCACCA 1211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                592 CCAGCCCCTTCGGAAAATATATGGATGTGCAATTTGATTACAAGGGAGCTCCTGTCGGTG
                                                                                                             CTTATGCTCGAGATGCCTTGGCCAAAGCAATCTATGGCCGTACCTTCTCCTGGCTTGTTA 1191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              492 TGCAGAGCAACCCCGTGTTAGAGGCCTTTGGGAATGCCAAGACTCTCCGCAACGATAACT
                                                                                                                                                          ACAAAAAGATTATTGCTAAAGGAGAAGAGCTGAACAGTCCACTTAACCTGGAGCAAGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           532 TGCAGTCCAATCCTGTTTTGGAGGCATTTGGCAATGCAAAAACCTTACGAAATGATAATT
                                                                                                                                                                                                                       TTAAATACCTCGCCAGGCTCCTCTGTAGACTCTACTGTACTACGGGAGTCTCTCATTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          472
                                                                                                                                                                                                                                        TCAAATATCTGAGCAGGCTCCTTGGTGTGGGGAAGGTACAACACTTAGGGAAGCCCTGACCC 1031
                                                                                                                                                                                                                                                                                GADATGTGCAGTTTGCCACAGATGAGCATGGACATGCCCAAGTCACAACAGAAAACCAGA 1011
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   412 GTATTCTTATATCTGGTGAGAGTGGGGCTGGGGAAGACTGAGGCCAGCAAGAAAATCCTAC 471
                                                                                                                                                                                                                                                                                                                                                ACTTCAATGATGATATAGAGGAATTGCTGAGCATTGTTGCTAGTGTACTACATTTGG
                                                                                                                                                                                                                                                                                                                                                                  ACTTCACTGAGGATGAAGTGGAGGACTTGCTCAGGATCGTGGCCAGCGTCCTACATCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    312 ATTTGTTTGCAGTGGCTGACACTGTATACCGGGCACTTCGTACTGAGCGTCGGGACCAGG 371
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TTAGCTCAATCAATGATAAAAATGACTGGAAGGTTGTTAGGCGAGCCTTGTCAATTATAA 891
                                                                                                                                                                                                                                                                                                                                                                                                                                TCTCCTCCATCAACGACAAGAGTGACTGGAAGGTTATGAGGAAGGCGCTGTCCGTCATTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGGGGCTGGATAAAAATGCCCAAAATTACCAGTACTTGATTAAGGGTCAGTGTGCCAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              192 TCATTTATACCTACATCGGTCCTGTCCTAGTCTCTGTCAATCCCTACCGAGACCTACAGA 251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CCACCCGGTTTGGAAAGTACATGGATGTGGAGTTTGACTTCAAGGGTGCCCCCGTGGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AGTTCTATGCAGAGACCTGCCCAGCCCCTGAACGGGGTGGGCGCAGTGCGAGACCGCCTGT 491
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AGTACTATGCTGTGACGTGTCCTGTCAGTGACCAGGTGGAGACTGTGAAAGACCGACTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TCTACAGCCGGCAGCATATGGAACGCTACCGTGGTGTCAGTTTCTATGAAGTACCACCTC 311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TCATATATACGTACATTGGGTCAGTCTTGGTATCTGTCAATCCTTACAAAGAGTTAGAGA 291
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AGAATTTCACCAGTGAGGCTGCCTTCATTGAGAACCTCCGGCGGCGGTTCCGGGAGAACC
```

FEATURES

CDS gene JOURNAL

JOURNAL MEDLINE PUBMED REFERENCE AUTHORS TITLE

REFERENCE AUTHORS

TITLE

SOURCE ORGANISM

Rana

VERSION KEYWORDS

RESULT 10 RCU14549 DEFINITION ACCESSION

RCU14549 Rana cate

В õ В γQ

112

BASE COUNT ORIGIN

1056 a

951

831

731

611 591 551 531

2270	TCATTGGCGACAGAAATTTCTCCGGGTGAAGCGATCAGCCATCTGTATCCAGTCATGGTG	2211	Q
2210 2331	CTCCCTGGAAGTCCGGCGGCGAGAGTCTAGCCACCAAGATCCAGGCGGCCTGGAGGGGCTT	2151 2272	Db Qy
2150 2271	TTCCCCAAGACCTTATTTGCCACAGAGGA 	2091 2212	Db
2090	ACGGCCCCAGGATGGTGGCCGTGTTGGTCAGACACCTCGGCTACAAGCCAGAAGAGTA	2031 2152	DP QA
15	ATATTGTGGTTTCCTAGGTACAAATCTCTTTGCCCTGATACTTGGCCTAACTGGGATGG	09	Db s
2091	CATTATTATGCATGTATT	2032	D D
1985		1986	Qy
1985	TGCGCGTGCGCAGAGCTGGCTTTGCCTATCGTCGCAAATATGAGGCTTTCCTGCA	1972	р д У
97		91	B 2
1930	CGCTTTGATGAGGTGCTCATCCGACATCAGGTGAAGTACCTGGGACTGATGGAGAATC	1871	γo
1870 1911	TGAGGTCTAAGGAGCCTGCCTATATCCGGTGCATCAAGCCAAACGACGCCCAAGCAGCCAGC	1811 1852	Qy Db
1810 1851	AGCGGCCAG-GACGGTGGCCACCCAGTTCAAGATGAGCCTCCTGCAGCTCGTGGAGATCC	1752 1792	Db Qy
1751 1791	GCAGCTCAATGAACCCCATCATGGCCCAGTGCTTGACAAGAGTGAGCTCAGTGACAAGA	1692 1732	dg VQ
1691 1731	TGACTGGGTTTCTGGATAAAAACAATGACCTCCTCTTCCGGAACCTGAAGGAGACCATGT	1632 1672	Оy
1631 1671	AATCCCTAGACCGAGGGGAGTTCCGCCTTCTGCATTATGCTGGAGAGGTGACCTACAGTG	1572 1612	Оy
1571 1611	ACACTGTCAAGCCCCACCCTCACTTCCTGACGCACAAGCTCGCTGACCAGAAGACCAGGA	1512 1552	Оy
1511 1551	ATGAAGAGTGCCTGCGTCCTGGGGAGGCCACGGACCTGACCTTTCTGGAGAAGTTGGAGG	1452 1492	d Q
1451 1491	ACAACAAGATCATCTGTGACCTGGTAGAGGGGAAGTTCAAGGGCATCATCTCCATCTTGG	1392 1432	Qу
1391 1431	AGTCGGAGCAGGAGGATACGAGGCTGAGGGCATCGCGTGGGAACCTGTCCAGTACTTCA	1332 1372	Qу Дъ
1331 1371	AGTTCTGCATCAACTACTGCAATGAGAAGCTGCAGCAGCTCTTCATCGAGCTGACTCTCA	1272 1312	Qу
1311	CTGTCATAGGACTTTTGGACATATATGGTTTTGAAGTTTTTCAACATAACAGCTTCGAAC	1252	ДĎ

RESULI AY0690 LOCUS DEFINI ACCESS VERSIO	рь		Qy	Îqd An	ם ב	Qy	рb	O _V	Db Qy	Db	Qy	Db 4	0 V	P 29	рь) Db	Qy	B 5		Dh Dh	Db 5	Q	B 8	DЪ	Qy	DЬ
SULT 11 69044 :US TINITION ESSION	3292	171	3111 3232	3172	717	991	052	931	2871 2992	2932	2811	872	751	2691	2752	692	571	2632	7 7 1	2451	512	201 101	2331 2452	2392	2271	2332
AY069044 3445 bp mRNA linear INV 17-DEC-2001 Drosophila melanogaster GH04201 full length cDNA. AY069044 AY069044.1 GI:17861423	GT 31/2 		TAAGAATGGCCACCTGGCTGTGGTGGCCCCACGGCTGAATTCTCCGGTGATGAAGGCTGCG 3170	TICLAGGEAGGEAGEGATEATTGACTTEACATEGGGETEAGAGGTTCTCATCACCAAGGE 3110	CHECTGAGAAAAHCAATAATATCAACATTAATCAGGGCAGCATCAAGTTTACAGTTGG 317	AGTGCTGACCGCGTGAACAATATCAACATCAAGCAGGGCAGCATAACGTTTGCAGGGGG 3		AAGGGAGATGTGGTGCTGCAGAGTGATCATGTGATCGAGACACTAACCAAGACGGCCCT 2	TGTCAGTAGCCTGAGTGATAGCCTATTTGTGCTTCACGTGCAGCGTGAAGAACAACAAGCA 2930		CATTGTGGAGGATGCTAAAGTCAAGCAGAGAATTGATTATGCCAACCTAACCGGAATCTC 2870		GACCGTAAGGGTTACAAGCCTCGCCCCCGGCAGCTGCTGCTCACGCCCAGTGCTGCTGTGT	CAGAGTGCTTCAATCCTTGGGCTCTGAACCCATCCAGTATGCCGGTGGCCCGTGGTAAAAATA 2750	CCCCCAGAGTGTCCCCAGACTCTTCATTAGCACACGCCTTGGCACAGAGGAGAATCAGCCC 2690	TA 275	AGCAGCTGCAGCAAAAGGCGGTGGCTAGTGAAATTTTCAAGGGCAAGAAGGACAACTA 263	GGAAATGTGCATGAACAACATGGTGTGGAAGTATTGCCGCAGAATTAACCCTGAATGGAA 2691	FBC	TCTGGACACCTCCTGGCCCACACCCCCCACCTGCCCTGAGAGAGGGCCTCAGAACTGCTACG 2510	57	ATGT 245	TCGACTCATCCGTGGCTTCATTTTGCGCCATTCACCCCGGTGCCCTGAGAATGCCTTCTT 2390	GTT	GCGTGGCACACTGGGCCGGAGGAAGGCAGCCAAGAGGAAGTGGGCAGCCCAGACCATCCG 2330	TCATCAACGACAGAAATTCCTGCACATGAAACATTCCGCGGTAGAGATCCAGTCGTGGTG 2391

6;

```
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 This clone was sequenced as part of a high-throughput process to sequence clones from Drosophila Gene Collection 1 (Rubin et al., Science 2000). The sequence has been subjected to integrity checks within 100 kb in the genome. Thus we believe the sequence to reflect accurately this particular cDNA clone. However, there are have not been detected in our initial analyses such as internal reverse transcription of contaminating genomic DNA, retained introns for further information about this sequence. For firther information about this sequence, including its location and retained process, please visit our web site conservation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Prosophila melanogaster.

Eukaryota, Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota; Rephydrayota; Endoptera; Endoptera; Brachycera; Muscomorpha; Rephydroidea; Drosophilade; Drosophila.

Rephydroidea; Drosophilidae; Drosophila.

Stapleton, M., Brokstein, P., Hong, L., Agbayani, A., Carlson, J., Change, M., Chavez, C., Dorsett, V., Farfan, D., Frise, E., George, R., Nunco, J., Pacleb, J., Paragas, V., Park, S., Phouanenavong, S., Wan, K., Liao, G., Miranda, A., Mungali, C.J., Yu.C., Lewis, S. F., Rubin, G.M. and Celniker, S., Dhouanenavong, S., Wan, K., Submitted (10-DEC-2001) Berkeley Drosophila Genome Project, Sequence Submitted by:
Lawrence Berkeley National Laboratory, One Cyclotron Road, Berkeley Drosophila Genome Project, Berkeley, CA, 94720, USA

Berkeley, CA, 94720, USA

This clone was general Laboratory

This clone was general Laboratory
                 907
                         ಬ
         IIGTQ"
a 898
           PRIIEFSTYIIDTVGTAŠIVSIVDRNSLEHNVVKGKGGVIDIQTGAEPGVVRDKGHLV
                                                                                                                                                                                                                                                                                                                                                                                                              /product-"GH04201p"
                                                                                                                                                                                                                                                                                                                                                                                                                                                  /note-"Longest ORF"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /gene="Myo61F"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ...oce alignment with genomic scaffold AE003471"
/db_xref="FLYBASE:FB9n0010246"
l17. .3224
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /Organism="Drosophila melanogaster"
/strain="y; cn bw sp"
/db_xref="taxon:7227"
/map="61F6-61F7"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                'gene≖"Myo6lf"
       O
928 g
Qy
                                       Дb
                                                                     Qy
                                                                                                          DЬ
                                                                                                                                        ρy
                                                                                                                                                                               В
                                                                                                                                                                                                               Qy
                                                                                                                                                                                                                                                      Ф
                                                                                                                                                                                                                                                                                  δõ
                                                                                                                                                                                                                                                                                                                           DE
                                                                                                                                                                                                                                                                                                                                                             Ø
                                                                                                                                                                                                                                                                                                                                                                                                  ₫
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
```

FEATURES

CDS

COMMENT

. BASE COUNT

٠. . . -

۲_

2138 2203	GCCAGAAGAGTACAAAATGGGCAGGACTAAGATCTTCATCCGATTCCCCCAAGACCTTATT	2079 2144
2078 2143	CATGTGGGCAGGACGGCCCCAGGATGGTGTGGCCGTGTTGGTCAGACACCTCGGCTACAA	2019 2084
2018 2083	CAAATATGAGGCTTTCCTGCAGAGGGTACAAGTCACTGTGCCCAGAGACATGGCC	1965 2024
1964 2023	GAAGTACCTGGGACTGATGGAGAATCTGCGCGTGCGCAGAGCTGGCTTTGCCCTATCGTCG	1905 1964
1904 1963	CAAGCCAAACGACGCCAAGCAGCAGGTCGCTTTGATGAGGTGCTCATCCGACATCAGGT	1845 1904
1844 1903	GAGCCTCCTGCAGCTCGTGGAGATCCTGAGGTCTAAGGAGCCTGCCT	1785 1844
1784 1843	TGACAAGAGTGAGCTCAGTGACAAGAAGCGGCCAG-GACGGTGGCCACCCAGTTCAAGAT	1726 1784
1725 1783	CTTCCGGAACCTGAAGGAGACCATGTGCAGCTCAATGAACCCCATCATGGCCCAGTGCTT	1666 1724
1665 1723	TTATGCTGGAGAGGTGACCTACAGTGTGACTGGGTTTCTGGATAAAAACAATGACCTCCT	1606 1664
1605 1663	CAAGCTCGCTGACCAGAAGACCAGGAAATCCCTAGACCGAGGGGAGTTCCGCCTTCTGCA	1546 1604
1545 1603	CCTGACCTTTCTGGAGAAGTTGGAGGACACTGTCAAGCCCCACCCTCACTTCCTGACGCA	1486 1544
1485 1543	GTTCAAGGGCATCATCTCCATCTTGGATGAAGAGTGCCTGCGTCCTGGGGAGGCCACGGA	1426 1484
1425 1483	CGCGTGGGAACCTGTCCAGTACTTCAACAACAACATCATCTGTGACCTGGTAGAGGAGAAA	1366 1424
1365 1423	GCAGCTCTTCATCGAGCTGACTCTCAAGTCGGAGCAGGAGGAATACGAGGCTGAGGGCAT	1306 1364
1305 ·	AGTGTTTCAGCATAACAGCTTCGAGCAGTTCTGCATCAACTACTGCAATGAGAAGCTGCA	1246 1304
1245 1303	TGAGAGCCCCAGCTGGCGAAGCACCACGGTTCTTGGGCTCCTGGACATTTACGGCTTTGA	1186 1253
1185 1252	CAGCCGGACATTCACCTGGCTGGTCAGAAAGATCAATAGGTCACTGGCCTCTAAAGAACGC	1126 1193
1125 1192	GAGCCCACTGAACCATGAACAGGCGGCATATGCAAGGGATGCGCTTGCCAAGGCTGTGTA	1066 1133

```
δÃ
                                                            В
                                                                                   γQ
                                                                                                                    В
                                                                                                                                              ρy
                                                                                                                                                                               DЬ
                                                                                                                                                                                                          QΥ
                                                                                                                                                                                                                                           DЬ
                                                                                                                                                                                                                                                                   Qy
                                                                                                                                                                                                                                                                                                       ДЬ
                                                                                                                                                                                                                                                                                                                                  γQ
                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                        δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                            Ър
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Вр
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δÃ
뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2324
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2139
3044
                                                            2984
                                                                                                                                                                                                                                                                                                                                                                                                                            2624
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2259
                              2967
                                                                                          2907
                                                                                                                                                                                  2864
                                                                                                                                                                                                                                                                           2730
                                                                                                                                                                                                                                                                                                                                                                                              2619
                                                                                                                                                                                                                                                                                                                                                                                                                                                            2559
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2564
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2439
                  CGAG
 CGAG
                                                                                                                                                                                                                                           CCAGTCCTTCTGCACCAAGTTCGATCGGCACGGCTACAAGTCCCGCGACCGCTTTATCCT
                                                                                                                                                                                                                                                           TGCCGTGCCCGTGGTAAAAATACGACCGTAAGGGTTACAAGCCTCGCCCCCGGCAGCTGCT
                                                                                                                                                                                                                                                                                                                                                                                 GAAGGACAACTACCCCCAGAGTGTCCCCCAGACTCTTCATTAGCACACGGCTTGGCACAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CAATGAAGAGTTTATTGCCAACGCCAAGCGTATGTGGCTGCTTCGACTGGCGAAGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CGATAAGATTCGTGCCTTTATCAAGGGCTTCATCACCCGGAACGATGCCCCGAATGGCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCAGAGCTATTGTCGCCGAAAGTTGGCACAGCAGGCGGCCCAAGAAGCGCCAGGGAGGCCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CTGGAGGGGCTTTCATTGGCGACAGAAATTTCTCCGGGTGAAGCGATCAGCCATCTGTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGCCACAGAGAGCTCCCTGGAAGTCCGGCGGCAGAGTCTAGCCCACCAAGATCCAGGCGGC
                                                            CATACCGCTCGACCTGAAAAAGGACAAGGGCGACTTGATTCTGATCATTCCGCGCATAAT
                                                                                                                                       TGC---CAACCTAACCGGAATCTCTGTCAGTAGCCTGAGTGATAGCCTATTTGTGCTTCA
                                                                                                                                                                                                                                                                                                       GCACATCCAGCGAGTCAACGACTTCGTGGCCAGCACCTTCGGCAGCGAGCAGCTTAAGTA
                                                                                                                                                                                                                                                                                                                                     GGAGA-----TCAGCCCCAGAGTGCTTCAATCCTTGGGCTCTGAACCCATCCAGTA
                                                                                                                                                                                                                                                                                                                                                                  GAAGAACAACTACGCGAGCAGTGTGTCCACTTGGTTCCAGGAGGACCGCATCCCCAAGGA
                                                                                                                                                                                                                                                                                                                                                                                                                            GCCGCAGCAGAAGAGGCAATTCGAGCTGAAGGTCCTGGCGGAGAAGGTCTTTAAGGGCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                          CCCTGAGTGGAAGCAGCAGCTGCAGCAAAAGGCGGTGGCTAGTGAAATTTTCAAGGGCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CGGCATCCTTCACCGCCTGCACCGTCTCCACTTGGCCAGGATCTACCGCCTTAAACTGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AGAACTGCTACGGGAACTGTGCATGAAGAACATGGTGTGGAAGTACTGCCGGAGCATCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GCCCACCAAGGTACTGGATAAGAGCTGGCCCCATGCCCCTGGGCACTGCGAGGAGGCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GAATGCCTTCTTCGTGCGCCACGTGCGCCCTCATTTTTGCTTAACCTGAGGCGGCAACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CCAGACCATCCGTCGACTCATCCGTGGCTTCATTTTGCGCCCATTCACCCCGGTGCCCTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CCAGTCATGGTGGCGTGGCACACTGGGCCGGAGGAAGGCAGCCAAGAGGAAGTGGGCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CTGGAAGGGATTGATGCAAAGGAGGAAGTATCTGAAACTGCGTGCTCAGGTGATCATAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CGATACGGAGGATGCCTACCAGGAGAAGAACATGAGATAGCGGCCATCATCCAGGCCCA
                                                                                        CGTGCAGCGTGAAGACAACAAGCAGAAGGGAGATGTGGTGCTGCAGAGTGATCATGTGAT
                                                                                                                    GCCGCTAGACAAGATCGACTTCACGCTGACGAACCACAACGACGACCTGATGGTCATCCG
                                                                                                                                                                                  GCTGAGCAACAAGGCTATATATGTCCTCGACGGCAAGACCTACAAGCAGGAAGCACCGCCT
                                                                                                                                                                                                               GCTCACGCCCAGTGCTGGTGGTCATTGTGGAGGATGCTAAAGTCAAGCAGAGAATTGATTA
 3047
                              2970
                                                                                                                                                                               2923
                                                                                                                                                                                                                                                                                                                                                                                              2678
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2438
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2378
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2198
                                                                                                                                                                                                                                                                         2789
                                                                                                                                                                                                                                                                                                                                    2729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2318
                                                            3043
                                                                                        2966
                                                                                                                    2983
                                                                                                                                                    2906
                                                                                                                                                                                                                2849
                                                                                                                                                                                                                                                                                                       2803
                                                                                                                                                                                                                                                                                                                                                                                                                            2683
                                                                                                                                                                                                                                                                                                                                                                                                                                                          2618
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2558
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2563
                                                                                                                                                                                                                                             2863
                                                                                                                                                                                                                                                                                                                                                                2743
```

RESULT 12
DMU07596
LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE

DMU07596

3382 bp myosin-IB

mRNA, mRNA

complete linear

cds.

INV 08-JUL-1994

Qy Ъ δÃ В ρ Вр Qy В δÃ ДЪ οy Вb Ωy B Ş Д δÃ В δÃ 망 Ş В δ DЬ Qy B Õ В Š 망 ð

밁 δÕ B δÃ Ъ

> ORGANISM Drosophila melanogaster U07596 U07596.1

GI:466257

fruit fly.

Drosophila melanogaster

Bukaryota; Metazoa; Arthropoda; Hexapoda; Insecta;

Neoptera; Endopterygota; Diptera; Brachycera; Muscc

Ephydroidea; Drosophilidae; Drosophila. ecta; Pterygota; Muscomorpha;

TITLE

FEATURES

```
Query Match 25.0
Best Local Similarity 58.6
Matches 1715; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PUBMED
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
AUTHORS
                                                                                                                                                                                                                       79 CAACTGAAAATGGAGACGGGCCTGCACGAGCGTGATCGTGCTGGAGTCCAGGACTTTGTG 138
                                                                                                                                                                                                                                            65 CGACTGACCATGGACAGCGCCTTGACTGCCCGAGACCGGGTAGGGGTGCAGGACTTTGTC 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JOURNAL
MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           JOURNAL
                                             CTACAGATCTAGAGCCGGCAGCATATGGAACGCTACCGTGGTGTCAGTTTCTATGAAGTA
                                                                                            GAGGACCTGATTTATACCTACATTGGCCAGGTGTTGATCTCCGTGAATCCCTACAAGCAG
                                                                                                                GAGAACCTCATTTATACCTACATCGGTCCTGTCCTAGTCTCTGTCAATCCCTACCGAGAC
                                                                                                                                                                           CTGCTGGAGAATTTCACCAGTGAGGCTGCCTTCATTGAGAACCTCCGGCGGCGGTTCCGG 184
                                                                                                                                                           CTCCTCGAGAACTACCAGAGCGAAGAAGCCTTCATCGGGAATCTGAAGAAGCGGTTCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Submitted (08-MAR-1994) Nancy S. Morgan, Yale University, Grand Blology, 266 Whitney Ave, New Haven, CT 06520-8103, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Morgan, N.S.
Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      The molecular cloning and characterization of Drosophila melanogaster myosin-IA and myosin-IB
J. Mol. Biol. 239 (3), 347-356 (1994)
                                                                                                                                                                                                                                                                                                                                                                                                 980
                                                                                                                                                                                                                                                                                                                                                                                                        /product="myosin-ib"
/product="myosin-ib"
/protein_id="AAA19591.1"
/db_xxef="a1:466258"
/translation="METGLHERDRAGVQDEVLLENYQSEEAFIGNLKKREQEDLIYTY
ISGESGSGKTEASKKVLQFTAACSGNQTTVEGVKKLLKSNPVLEAFGNAKTNRNDNS
IGQVLISVNPYKQLPIYTDNHVKAYRNKHEYEMPPHIFAVTDNAFRSLIEENRGQCVL
SREGKYMDJQDFERGAPIGGNILMYLLEKSRVVLAQMGGERNEHIFYQLLAGADDALLQ
SREGKYMDJQDFERGAPIGGNILMYLLEKSRVVLAQMGGERNEHIFYQLLAGADDALLQ
LGLERALDTYSYLTDGLMGTVYSINDADSFKQVQQALTVIDFGKEBGREIFGIYASI
SELECALDTYSYLTDGLMGTVYSINDADSFKQVQQALTVIDFGKEBGREIFGIYASI
QELAIYARDALAKAVVDRLFSWLVQTAARLLGVNASELEAALFHRTIDARGDVVTSPLN
SFEQFCINFCNEKLQQLFIELTLKSEQDEYRREGIENIPVEYFDNKVICNLIEEKHKQ
AGEVTYSYNGFILDKNUDLFRDLKETLSKAGNGIVRSCFPERELERKHKVARDFERLVHY
YRRTYSNGFILDKNUDLFRDLKETLSKAGNGIVRSCFPERELERSLKTPETA 1TQER
PRILFCTEDAYQSKHEIAAIIQAHWKGLBLVHQVKYLGLMENLEVRRAGFA
KKREAADKIRAFIKGFITRNDAPNGFNEEDFIANAXENFTKVLFTKVLDKSWPH
APGHCEAGGILHRLHRHLHARIYBLGSGQLKVGFEKKVLKARQVITMOSYCRRKLAQQAA
APGHCEBAGGILHRLHRHLHARIYBLGFTGTAVFNDELKFTKVLKSKSWPH
TWFQEDATIFKBIDQNUDTWASTFGSGULKVGSFCTKFDHGYKSGKBNTYASSYS
VLDGKTYKGCHRLPLDKIDFTLTNNNDLMVIRFGCGTKFDHGYKSGRBFILLSNKAIY
IIDTVGTAASIVSTUDRNSIFRHNVVXGKGGTVTDTGARSCHGTLIITFRILESTY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8201616
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mooseker, M.S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 (bases 1 to 3382)
Morgan, N.S., Skovron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (bases 1 to
                                                                                                                                                                                                                                                                                                                                                                                               2
                                                                                                                                                                                                                                                                                                                                                                                               IIDTVGTASIVSIVDRNSLEHNVVKGKGGVIDIOTGAEFGVVRDKGHLVIIGTO"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /note-"amino acids 1-693, typical myosin head amino acids 694-765, neck domain containing 3 amino acids 766-1026, unique tail domain"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /tissue_type="head minus mouthparts minus antennae"
/Clone_lib="adult head lambda-GEM2 cDNA library fro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /dev_stage="adult"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /organism="Drosophila
/db_xref="taxon:7227"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /chromosome="3L"
                                                                                                                                                                                                                                                                                                                           25.0%;
                                                                                                                                                                                                                                                                                                                                                                                          .3382
3 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .3168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Skovronsky,D.M., Artavanis-Tsakonas,S. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3382)
                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                               Score 916.6; DB 3;
Pred. No. 6.1e-220;
0; Mismatches 1179;
                                                                                                                                                                                                                                                                                                                                                                                   911 g
                                                                                                                                                                                                                                                                                                                                                                                 708 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       melanogaster"
                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                           Length 3382;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    domain;
IQ motifs;
                                                                                                                                                             198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Genetics
                                                                                                                                                                                                                                                                                        6,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3
                                                                Qy
                                                                                                   Ъ
                                                                                                                              Ωy
                                                                                                                                                                 DЬ
                                                                                                                                                                                             QV
                                                                                                                                                                                                                              Ъ
                                                                                                                                                                                                                                                          ΩV
                                                                                                                                                                                                                                                                                             DЬ
                                                                                                                                                                                                                                                                                                                         Qy
                                                                                                                                                                                                                                                                                                                                                          DЪ
                                                                                                                                                                                                                                                                                                                                                                                      ρy
                                                                                                                                                                                                                                                                                                                                                                                                                        Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   рЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ДЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ДЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 γ
                                   1327
                                                                1325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Qy
                                                                                                1267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Дd
                                                                                                                                                               1207
                                                                                                                                                                                             1205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             QY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                            1156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ₽
                                                                                                                                                                                                                                                            1145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δÃ
                                                                                                                                                                                                                                                                             1085 CAGGCGGCATATGCAAGGGATGCGCTTGCCAAGGCTGTGTACAGCCGGACATTCACCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                      965 AACCAGCTCAAATATCTGACCAGGCTCCTTGGTGTGGAAGGTACAACACTTAGGGAAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   905 CATCTGGGCAACATCCACTTTGCTGCTGACGAGGACAGCAATGCCCAGGTTACTACTGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               859 GTGATCGATTTCGGCAAGGAGGAGCAGCGCGAGATCTTCGGAATCGTGGCCAGCATTCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            845
785 GCCAAGGTCTCCTCCATCAACGACAAGAGTGACTGGAAGGTTATGAGGAAGGCGCTGTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          739 CAGGAACTCGGCCTGGAGCGGCTCTGGACACTTATAGCTACCTGACGGATGGGCTCAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           725
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TTCGAGCAGTTCTGCATCAACTACTACTACAGCAATGAGAAGCTGCAGCAGCTCTTCATCGAGCTG 1324
                                                                TTTGAGCAGTTCTGCATCAATTTCTGCAACGAGAAGCTGCAGCAGCTGTTCATCGAGCTT
                                                                                                                                               AGCACCACGGTTCTTGGGCTCCTGGACATTTACGGCTTTGAAGTGTTTCAGCATAACAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    619 ATCGGAGGCAACATCCTAAACTATCTGTTGGAAAAGTCGCGAGTGGTGGCTCAAATGGGA
                                                                                                                              AGAAACAATGTGATGGGCATTCTGGACATCTATGGCTTCGAGATCTTCCAGAAGAACAGC
                                                                                                                                                                                           CTGGTTCAGCGTCTCAACATCTCGCTGCAGGCGAAGGAAACGCGGGCATCC-----
                                                                                                                                                                                                                       CTGGTCAGAAAGATCAATAGGTCACTGGCCTCTAAGGACGCTGAGAGCCCCCAGCTGGCGA 1204
                                                                                                                                                                                                                                                          CTCGCCATCTATGCCAGGGACGCCTTGGCCAAGGCTGTCTATGATCGTCTGTTCTCCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     559
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  545
                                                                                                                                                                                                                                                                                                                                         CTGACCCACAGGAAGATCATCGCCAAGGGGGAAGAGCTCCTGAGCCCACTGAACCTTGAA 1084
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              439 GTGCTGCAGTTCATAGCCGCCTGCTCCGGCAACCAGACGACCGTCGAGGGCGTCAAGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          425 CTGCTCCAGTTCTATGCAGAGACCTGCCCAGCCCCTGAACGGGGTGGCGCAGTGCGAGAC
                                                                                                                                                                                                                                                                                                                       CTAACGCACCGCACAATTGACGCTCGGGGAGATGTGGTGACCTCACCACTGAACCAGGAG
                                                                                                                                                                                                                                                                                                                                                                                     GATCTGGTGGTCACCGCTGCTCGTTTGCTGGGTGTAAATGCAAGCGAACTGGAAGCCGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                  CATTTAGGAAACGTTGGCTTCACTGAGGTGGAGG---GCAATGCCAAGGTGAACAGCAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        259 CTGCCCATCTACACCGATAACCATGTCAAGGCGTACAGAAACAAGCACTTCTACGAGATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GTCATTGACTTCACTGAGGATGAAGTGGAGGACTTGCTCAGCATCGTGGCCAGCGTCCTA 904
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGAACCGTGACGAGCATTAACGATGCGGACAGCTTCAAGCAGGTCCAGCAGGCCCTCACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CGTCGGCTGGGCTTGGAACGGAACCCCCAGAGCTACTTGTACCTGGTGAAGGGCCAGTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGCGAGCGCAACTTCCACATCTTCTACCAACTCCTGGCCGGCGCGGCGACGAGGCCCTTCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GTGGGAGGCCACATTCTCAGTTACCTCCTGGAAAAGTCCCGGGTGGTGCACCAAAATCAC 664
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GATAACTCCAGCCGGTTTGGAAAGTACATGGATGTGCAGTTTGACTTCAAGGGTGCCCCC 604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GACAACTCCTCGCGGTTCGGCAAGTACATGGACATCCAGTTCGATTTCAAAGGAGCTCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAGCTGCTAAAAGAGCAATCCCCGTGCTGGAGGCCCTTCGGCAATGCCAAAGACAAACCGCAAT 558
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CGCCTGTTGCAGAGCAACCCCGTGTTAGAGGCCTTTGGGAATGCCAAGACTCTCCGCAAC 544
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CCCCACACATCTTTGCGGTGACTGACAACGCCTTCCGTTCGCTGATCGAGGAGGAACCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CCACCTCATTTGTTTGCAGTGGCTGACACTGTATACCGGGGCACTTCGTACTGAGCGTCGG
```

844 798 784

678

618

484

ر ،

В δ д Ş Ъ δ

199 185 139 125

1266 1264

1095

1024 975 964 918

245

BASE CO

COUNT

```
2038
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1927
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1924
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1807
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1745
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1625
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1505
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1385
2407
                                                                                                                                                2287
                                                                                                                                                                                      2278
                                                                                                                                                                                                                                                                                                 2167
                                                                                                                                                                                                                                                                                                                                       2158
                                                                                                                                                                                                                                                                                                                                                                            2107
                                                                                                                                                                                                                                                                                                                                                                                                                                                    2047
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1987
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1984
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1867
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1864
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1804
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1687
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1685
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1627
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1567
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1565
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1507
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GACAAGAAGCGGCCAG-GACGGTGGCCACCCAGTTCAAGATGAGCCTCCTGCAGCTCGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TACTTCAACAAGATCATCTGTGACCTGGTAGAGGAGAAGTTCAAGGGCATCATCTCC 1444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CAGCCGGGTCGCTTTGATGAGGTGCTCATCCGACATCAGGTGAAGTACCTGGGACTGATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CGACAGAAATTTCTCCGGGTGAAGCGATCAGCCATCTGTATCCAGTCATGGTGGCGTGGC
                                                                                                                                                                                                                                                                                                                     GAAGTCCGGCGGCAGAGTCTAGCCACCAAGATCCAGGCGGCCTGGAGGGGGCTTTCATTGG
                                                                                                                                                                                                                                                                                                                                                                                             GGCAGGACTAAGATCTTCATCCGCATTCCCCCAAGACCTTATTTGCCACAGAGGACTCCCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CAGGATGGTGTGGCCGTGTTGGTCAGACACCTCGGCTACAAGCCAGAAGAGTACAAAATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GAGCGCTACAAGTCCCTGAGTAAGTCCACCTGGCCCAATTACAAGGGTCCCGGTGGCCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CAGAGGTACAAGTCACTGTGCCCAGAGACATGGCC-----CATGTGGGCAGGACGGCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GAGAATCTGCGCGTGCGCAGAGCTGGCTTTGCCTATCGTCGCAAATATGAGGCTTTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCATGTGCAGCTCAATGAACCCCCATCATGGCCCCAGTGCTTTGACAAGAGTGAGCTCAGT 1744
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TACAGTGTGACTGGGTTTCTGGATAAAAACCATGACCTCCTCTTCCGGAACCTGAAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCAGGAAATCCCTAGACCGAGGGGAGTTCCGCCTTCTGCATTATGCTGGAGAGGTGACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TTGGAGGACACTGTCAAGCCCCCACCCTCACTTCCTGACGCACAAGCTCGCTGACCAGAAG 1564
                   CACGTGCGCGCCTCATTTTTGCTTAACCTGAGGCGGCAACTGCCCCGGAATGTTCTGGAC
                                                                                                                                                                                                                                                                                                 CAGGAGAAAACATGAGATAGCGGCCATCATCCAGGCCCACTGGAAGGGATTGATGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAAGCGGCCGTCCAGCAGTTGGTGAAAGATTTGGGCTGGGACGAGGAAAAGTACAGGGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GAGAATCTGCGTGTGAGGCGAGCTGGTTTCGCCTACCGACGAACGTATGAGCTCTTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GAGATCCTGAGGTCTAAGGAGCCTGCCTATATCCGGTGCATCAAGCCAAACGACGCCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AGCCTGAAGCGTCCGGAGACGGCTATTACCCAGTTCCGGGCATCTCTTAACAACCTCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TACAGTGTCAATGGATTCCTGGACAAGAACAATGACCTGTTGTTCAGGGATCTAAAAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATCAAGAAAATCATGCTGCGCGATGAGTTCCGCTTGGTGCACTATGCCGGCGAGGTCACC
AACGCCAAGCGTATGTGGCTGCTTCGACTGGCGAAGGAGCTGCCCACCAAGGTGCTAGAT
                                                                                                                                              AAGTTGGCGCAGCAGGCGAAGAAGCGCAGGGAAGGCCGCCGATAAGATTCGTGCCTTT
                                                                                                                                                                                  ACACTGGGCCGGAGGAAGGCAGCCAAGAGGAAGTGGGCAGCCCAGACCATCCGTCGACTC
                                                                                                                                                                                                                       AGGAGGAAGTATCTGAAACTGCGTGCTCAGGTGATCATAATGCAGAGCTACTGTCGCCGA
                                                                                                                                                                                                                                                                                                                                                                          GGCGAGACGAAACTATTCATCCGCTGGCCGAGAACCCTGTTCGATACGGAGGATGCCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCCTCAGCAAGGCTGGCAACGGCATTGTGAGGAGCTGCTTCCCAGAGAAGGAGCTGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1684
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1986
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1983
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1923
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1863
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1803
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1746
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1686
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1626
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1624
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1566
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1504
                                                                                                         2397
                                                                                                                                                                                                                       2286
                                                                                                                                                                                                                                                                                                                                                                                                                                                  2106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2046
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1926
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1866
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1806
                                                                                                                                                                                                                                                            2277
                                                                                                                                                                                                                                                                                                 2226
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2037
```

В Ş В Qy 밁 Qy DЪ Qy 밁 Ş В Ş В δÃ Вb δÃ

ğ В

Qγ Ър Ş В δδ

Qy 밁 Qy 밁 Ş Ъ δÃ В Qy рь

δÃ Вþ

밁

Conservative

0,

Mismatches 1081;

Indels

7;

```
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 13
AC012834/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ър
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                γQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        рь
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Dр
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                    COMMENT
                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Locus
Query Match
Best Local Similarity
Matches 1561; Conserv
                                                                                                                                                                                                                                                                                                                                       JOURNAL
                                                                                                                                                                                                                                                                                                                                                        TITLE
                                                                                                                                                                                                                                                                                                                                                                           AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2947
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2827
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2707
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2527
                                                                                              COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2926
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAGCAGAAGGGAGATGTGGTGGTGCTGCAGAGTGATCATGTGATCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GTCATTGTGGAGGATGCTAAAGTCAAGCAGAGAATTGATTATGC---CAACCTAACCGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TACGACCGTAAGGGTTACAAGCCTCGCCCCCGGCAGCTGCTGCTCACGCCCAGTGCTGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GACTTCGTGGCCAGCACCTTCGGCAGCGAGCAGCTTAAGTACCAGTCCTTCTGCACCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TTCGAGCTGAAGGTCCTGGCGGAGAAGAAGATCTATAAGGGCAAGAAGAACAACTACGCGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CACCGTCTTCACTTGGCCAGGATCTACCGCCTTAAACTGACGCCGCAGCAGAAGAGGCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TGCATGAAGAACATGGTGTGGAAGTACTGCCGGAGCATCAGCCCTGAGTGGAAGCAGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACCTCCTGGCCCACCCCCACCTGCCCTGAGAGAGGCCTCAGAACTGCTACGGGAACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATCTCTGTCAGTAGCCTGAGTGATAGCCTATTTGTGCTTCACGTGCAGCGTGAAGACAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TATGTCCTCGACGGCAAGACCTACAAGCAGGAAGCACCGCCTGCCGCTGGACAAGATCGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TTCGATCGGCACGGCTACAAGTCCCGCGACCGCTTTATCCTGCTGAGCAACAAGGCTATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CCCAGAGTGCTTCAATCCTTGGGCTCTGAACCCATCCAGTATGCCGTGCCCGTGGTAAAA 2748
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGTGTCCCCAGACTCTTCATTAGCACACGGCTTGGCACAGAGGAGA-----TCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTGCAGCAAAAGGCGGTGGCTAGTGAAATTTTCAAGGGCAAGAAGGACAACTACCCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAGGACAAGGGCGACTTGATTCTGATCATTCCGCGCATAATCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TTCACGTTGACGAACCACAACGACGACCTGATGGTCATCCGCATACCGCTCGACCTGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGTGTGTCCACTTGGTTCCAGGAGGACCGCATCCCCAAGGAACACATCCAGCGAGTCAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAGAGCTGGCCCCATGCCCCCGGGCACTGCGAGGAGGCCTCCGGCATCCTTCACCGCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Drosophila melanogaster Drosophila melanogaster
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AC012834 116374 Drosophila melanogaster, ***
                                                                                                                                                                                                                                                                                              Direct Submission
Submitted (03-WC-1999) Celera Genomics, 45 w
Rockville, MD, USA
This sequence was identified as CDM:10210646
                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota; Meoptera; Endopterygota; Diptera; Brachycera; Muscomorpha; Ephydroidea; Drosophilidae; Drosophila.

1 (bases 1 to 116374)
                                                                                                                                                                                                                                                                               For further information
                                                                                                                                                                                                                                                                                                                                                                      Adams, M. and Venter, J.C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HTG; HTGS_PHASE2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AC012834.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 pieces
                                                                                                                                                                                                                                                             fly@celera.com
                                                                                                                                                                                  This sequence will be replaced
by the finished sequence as soon as it
the accession number will be preserved
                                                                                                                                                                                                                                          NOTE: This is a 'working draft' sequence
                                                                                              Ø
                                                                                       /organism="Drosophila melanogaster"
/db_xref="taxon:7227"
. 26648 c .26933 g 31500 t
                                                                                                                                                                    Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GI:6223487
                   20.5%;
57.1%;
                   Score 749.4; DB 2; Pred. No. 1.3e-177;
                                                                                                                                                                                                                                                                               on this
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   bp DNA linear
SEQUENCING IN PROGRESS
                                                                                                                                                                                                                                                                               sequence you
                                                                                                                                                                                                       ST
                                  Length 116374;
                                                                                                                                                                                                                                                                                                                                       West
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2970
                                                                                                                                                                                                       available
                                                                                                                                                                                                                                                                               by the submitter may e-mail to
                                                                                                                                                                                                                                                                                                                                       Gude
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   hTG 03-NOV-1999
***, in ordered
                                                                                                                                                                                                                                                                                                                                       Drive,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2706
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2646
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2586
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2577
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2925
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2886
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2826
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2766
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2688
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2637
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2946
```

```
DЪ
                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Дb
                             35789 TCTGCATCAATTTCTGCAACGAGAAGCTGCAGCAGCTGTTCATCGAGCTTACCCCTTAAGT
1335 CGGAGCAGGAGGAATACGAGGCTGAGGGCATCGCGTGGGAACCTGTCCAGTACTTCAACA 1394
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       р
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ф
                                                                                                                   35849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               B
                                                                                                                                  35900 GCCTCÁACATCTCGCTGCAGGCGAÁGGAAACGCGGGCATCC-----AGAAATÁATG 35850
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ş
                                                                             Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                            36020 GCACAATTGACGCTCGGGGAGATGTGGTGACCTCACCACTGAACCAGGAGCTCGCCATCT 35961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                     1155 AGATCAATAGGTCACTGGCCTCTAAGGACGCTGAGAGCCCCCAGCTGGCGAAGCACCACGG 1214
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ş
                                                                                                                                                                                                        36080 TCACCGCTGCTCGTTTGCTGGGTGTAAACGCAAGCGAACTGGAAGCCGCCCTAACGCACC 36021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                                                                                    36137 ACGTTGGCTT----CACTGAGGTGGAGGGCAATGCCAAGGTGAACAGCAGGGATCTGGTAG 36081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                              1035 GGAAGATGATGGCCAAGGGGGAAGAGGTCCTGAGGCCACTGAACCTTGAACAGGGGGCAT 1094
                                                                                                                                                                                                                                                                                                                                                                                                         855 TCACTGAGGATGAAGTGGAGGACTTGCTCAGCATCGTGGCCAGCGTCCTACATCTGGGCA 914
36197 TCACCAAGGAGGAGCAGCGCGAGATCTTCGGAATCGTGGCCAGCATCTGGGCA 914
36197 TCACCAAGGAGGAGCAGCGCGAGATCTTCGGAATCGTGGCCAGCATTCTGCATCTAGGAA 36138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                             36257 CGAGAÁTTAACGATGCGGACAGCTTCAAGCAGGTCCAGCÁGGCTCTCACTGTGÁTCGÁTT 36198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 36317 GGGTATTGACAATTGGTCTCTGATCTTCGAGTTCTAATCCACAGCTCAATGGCACCGTGA 36258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    36377 CTGGAGCGGGCTCTGGACACTTATAGCTACCTGACAGATGGGGTAAGTGGGCAGCCTGGA 36318
                                                                                                                                                                                                                                                                                                                    975 AATATCTGACCAGGCTCCTTGGTGTAGGAAGGTACAACACTTAGGGAAGGCCCTGACCCACA 1034
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         36437 Trecacaterretaceaacterreseccoscesceacoscerretecacagaactocos 36378
                                                                                                                                                                                                                                                                                                                                                                      915 ACATCCACTTTGCTGACGAGGACAGGACGAGTTACTACTGAGAACCAGCTCA 974
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              36497 ATCCTAAACTATCTGCTGGAAAAGTCGCGAGTGGTGGCTCAAATGGGAGGCGAGCGCAAC 36438
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   36557 CGGTTCGGCAAGTACATGGACATCCAGTTCGATTTCAAAGGAGCTCCGATCGGAGGCAAC 36498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      795 CCTCCATCAACGACAAGAGTGACTGGAAGGTTATGACGAAGGCGCTGTCCGTCATTGACT 854
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            791 ------GTCT 794
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       36617 AGCAATCCCGTGCTGGAGGCCTTCGGCAATGCCAAGACAAACCGCAATGACAACTCCTCG 36558
                                           TCTGCATCAACTACTGCAATGAGAAGCTGCAGCAGCTCTCATCGAGCTGACTCTCAAGT 1334
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         737 TTGGAACGGAACCCCCAGAGCTACTTGTACCTGGTGAAGGGCCAGTGTGCCAAG----- 790
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             36677 ATAGECCCETCECGCCAACCAGACGACGCTCGAGGGCCTCAAGGACAAGCTGCTAAAG 36618
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                377 ATGATTTCTGGAGAGAGTGGGGCAAGACAGAGAGGCCACCAAGAGACTGCTCCAGTTC 436
36737 CTCATCTCCGGAGAGAGTGGTTCCGGCAAGACAGAGGCCTCCAAGAAGACTGCTCCAGTTC 36678
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            557 CGGTTTGGAAAGTACATGGATGTGCAGTTTGACTTCAAGGGTGCCCCCGTGGGAGGCCAC 616
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      437 TATGCAGAGACCTGCCCAGCCCCTGAACGGGGTGGCGCAGTGCGAGACCGCCTGTTGCAG 496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATTCTCAGTTACCTCCTGGAAAAGTCCCGGGTGGTGCACCAAAATCACGGAGAGCGGAAC 676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AGCAACCCCGTGTTAGAGGCCTTTGGGAATGCCAAGACTCTCCGGCAACGATAACTCCAGC 556
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TTTGCGGTGACTGACAACGCCTTCCGTTCGCTGATCGAGGAGAACCGCGGGCCAGTGCGTG 36738
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TTTGCAGTGGCTGACACTGTATACCGGGCACTTCGTACTGAGCGTCGGGACCAGGCAGTG 376
```

0y

0 = -		
04 05 05 05 05 05 05 05 05 05 05 05 05 05		
Oy O	оь Оу Ор Оу	Q _y
354 353 353 353 353 353 353 373 373 373 373	35 1 35 .	ω
	455 455 609 515	5729 1395
COCACTICACTICACTICACTICACTICACTICACTICAC	ACAA HIII ACAA AAGAA I III AGGAA CTGTC	990
AGACO SCTGG SCTGG ATGA AGGA AGGA AGGA AGGA AGGA AGGA	AGATAGETS AGTGC CAAG	AGCA
CGAGG TIGAL TI	CATC CATC CATC CATC CAGC CAGC	GGAT
GGGA TTGAN T	TGTG TGCA TGCA TGCA TGCA TGCA TGCA TGCA TGCA TGCA	 GAAT
CCCTAGACCGAGGGGGGGGTTCCGGC TCATGCTGCTGCTGATAAAACAATC CTGGGTTTCTGGATAAAACAATC ATGATTCTTGTGACCAACAACAACAACAACAACAACAACAACAACAACAAC	GEOCGAGCACCACCAC	l I
1575 CCCTAGACGGAGGGGATTCCGCCTTCTGCATTAAGGGCCCCGCCCCARTCAAGAAA 15489 TCATGCTGCGCCAAGAGAGTTCCGCCTTCTGCATTATGCTGGAGAGGTCACGTTCAAGAAA 15489 TCATGCTGCGCAAGAGATCAAGAACATTACCTGGACAGGTCACCTAAGGAAA 15490 TCATGCTGCGCAAAAAAAAAAAAAAAAAAAAAAAAAAAA	ACAMONICATCITICACCITOGTAGAGGAGAAGTTCAAGGGCATCATCATCTTCGATCTTAGATCTAGATCTACATCTTTGATTAGAGGAGAAGTTCAAGGGCATCATCTTCCATCTTTGATTAGAGGAGAAGTACAAGGGCATCATCTTCCATACTTGATTAGAAGAGTGCCTTGCTTG	
CUTCTGCATTATGCTGGAGGGCCCCCACÁTCÁAGAGA	GAGG	IIII GAGG
CCAC CCAC CCAC CCAC CCAC CCAC CCAC CCA	AGAA HHH AGAA CGGA HHH CGCAC	GCA
PITCA	GTTC GCAC CCTG. Praag.	CGAC
ANTANTAGGGGCCCCCCA ATTANTCCTGGACAGGTGAC TITTCCGGAACCTGAAGGAI TITTTCCGGAACCTGAAGGAI TITTTCCGGAACCTGAAGGAI TITTTCAGGAACCTGAAGGAI TITTTCAGGAACCTGAAGGAI TITTTCAGGAACCTGAAGGAI TITTTCAGGAACCTGAAGGAI TITTTCAGGAAACGAACCTCATG TAAGCCAAAAGGACCTGCAGG AAATATGAAGGACTTGATGCCAAGGAI TITTTITTCAGGACCTGCAGGAACCTTCCTGCAAGGAACCTTCCTGCAAGGAACCTTCCTGCAAGGAACCTTCCTGCAAGGAACCTTCCTGCAAGGAACCTAAAGGAACCTCAAAAAAAA	AAAGGAAAGGAAAGGAAAGGAAAGGAAGGTAAGGTAAG	1111 1111
GCCC AGAGA CCAGC AGACC AACC AACC AACC A	GCAT	I I
GETCA AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	CATC CATC CATC GGAG 111 TGAG	TGTC
CCCACÁTCÁA TGAACTACAG	PTCCA FILL TCCA TCCA AAGT AAGAA AAGAA	GAG!
CCAGG CCAGGT CCAGGT CCAGGT CCAGGT CCAGGT CCAGGT CCAGGT ATTC CCAGG ATTC CCAGG ATTC CCAGG ATTC CCAGG ATTC CCAGG ATTC CCAGG ATTC CCAGG	VTCTT	PACT
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	GGAC	I I I I I
163 354 169 353 353 353 353 353 353 353 353 353 35	G 35 G 35 A 15 A 35	ى د
334 4 4 4 9 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	154 154 1610 114 114 550) V

```
JOURNAL
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AC010007
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VERSION
                                                                                                                                                                                                                        TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           34349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  34469
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2936 GAGATGTGGTGCTGCAGAGTGATCATGTGATCGAG 2970
                                                                                                                                                                                                                                              Abams, D., Holt, R.A., Evans, C.A.,
Gocayne, J.D., Tabor, P., Williamson, A., Homsi, F.H.,
Dugan-Rocha, S.D., Sodergren, E.S., Hodgson, A.H., Chen, R.C.,
Ayele, M., Scott, G.S., Worley, K.W., Amamatides, P.G., Brandon, R.C.,
Ayele, M., Scott, G.S., Worley, K.W., Amamatides, P.G., Brandon, R.C.,
Rogers, Y., An, H., Baldwin, D., Beeson, K.Y., Brown, M., Buhay, C.,
Busam, D.A., Center, A., Chen, G., Chen, Z., Clerc-Blankenburg, K.,
Davenport, L.B., Dietz, S.M., Ding, Y., Dodson, K., Doup, L.E.,
Davenport, L., Emery-Cohen, A., Ferriera, S., Garg, N.D.S., Houck, J.,
Draper, H., Emery-Cohen, A., Ferriera, S., Garg, N.D.S., Houck, J.,
Hostin, D., Howland, T.J., Hume, J., Ibegwam, C., Jalali, M., Kovar, C.,
Liu, W., Mattei, B., McIntosh, T.C., Morgan, M., Moy, M., Murphy, B.,
Nelson, K.A., Ndassa, Y., Nguyen, N., Perez, L., Pittman, G.S., Puri, V.,
Scheeler, F., Shen, H., Strong, R., Tector, C., Wang, Q., Williams, S.M.,
Xiang, J., Zaveri, J.S., Zhou, J., Zorrilla, S., Smith, H.O.,
Weinstock, G., Gibbs, R. and Venter, J.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CCAGCACCTTCGGCAGCGAGCAGCTTAAGTACCAGTCCTTCTGCACCAAGTTCGATCGGC 34290
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GACTCTTCATTAGCACACGGCTTGGCACAGAGGAGA----TCAGCCCCAGAGTGC 2698
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AGGCGGTGGCTAGTGAAATTTTCAAGGGCAAGAAGGACAACTACCCCCAGAGTGTCCCCCA 2647
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACATGGTGTGGAAGTACTGCCGGAGCATCAGCCCTGAGTGGAAGCAGCAGCTGCAGCAAA 2587
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CCACACCCCCACCTGCCCTGAGAGAGGCCTCAGAACTGCTACGGGAACTGTGCATGAAGA 2527
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GTATGTGGCTGCTTCGACTGGCGAAGGAGCTGCCCACCAAGGTACTGGATAAGAGCTGGC 34590
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CGAACCACAACGACCTGATGGTCATCCGCATACCGCTCGACCTGAAAAAGGACAAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GTAGCCTGAGTGATAGCCTATTTGTGCTTCACGTGCAGCGTGAAGACCAACAACCAAGCAGAAGG 2935
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACGGCTACAAGTCCCGCGACCGCTTTATCCTGCTGAGCAACAAGGCTATATATGTCCTCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TTCAATCCTTGGGCTCTGAACCCATCCAGTATGCCGTGCCCGTGGTAAAAATACGACCGTA 2758
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCCATGCCCCTGGGCACTGCGAGGAGGCCTCCGGCATCCTTCACCGCCTGCACCGTCTCC 34530
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CTTGGTTCCAGGAGGACCGCATCCCCAAGGAGCACATCCAGCGAGTCAACGACTTCGTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AGGTCCTGGCGGAGAAGGTCTTTAAGGGCAAGAAGAACAACTACGCGAGCAGTGTGTCCA 34410
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACTTGGCCAGGATCTACCGCCTTAAACTGACGCCGCAGCAGAAGAGGCAATTCGAGCTGA 34470
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GCGACTTGATTCTGATCATTCCGCGCATAATCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACGGCAAGACCTACAAGCAGAAGCACCGCCTGCCGCTAGACAAGATCGACTTCACGCTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGGATGCTAAAGTCAAGCAGAATTGATTATGC---CAACCTAACCGGAATCTCTGTCA 2875
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AGGGTTACAAGCCTCGCCCCGGCAGCTGCTGCTCACGCCCAGTGCTGTGGTCATTGTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Drosophila melanogaster
Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
Neoptera; Endopterygota; Diptera; Brachycera; Muscomorpha;
Ephydroidea; Drosophilidae; Drosophila.

1 (bases 1 to 175481)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AC010007 175481 bp DNA linear INV 01-JUN Drosophila melanogaster 3L BAC RP98-17K17 (Roswell Park Cancer Institute Drosophila BAC Library) complete sequence.
                                       Worley,K.C., Adams,C., Adio-Oduola,B., Ali-osman,F.R., Allen,C., Alsbrooks,S.L., Amaratunge,H.C., Are,J.R., Banks,T., Barbaria,J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AC010007
AC010007.4 GI:21306589
                                                                                                                                                                       Unpublished
                                                                                                                                                                                                                        Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             fruit fly.
                                                                                                                       (bases 1 to 175481)
    Bimage, K., Blankenburg, K.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         34075
Bonnin, D., Bouck, J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   34230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            34110
```

Ş Дb Ş Вb Ş 밁 Ş DЬ QΥ Вb δ Ъ õ 밁 Ş

Qy 망

Davy Carroll L. Dederich, D.A., Delaney, K.R., Delgado, O., Denn, A.L., Ding, Y., Dinh, H.H., Douthwaite, K.J., Draper, H., Dugan Rocha, S., Durbin, K.J., Earnhart, C., Edgar, D., Edwards, C.C., Elhaj, C., Escotto, M., Falls, T., Ferraguto, D., Elagar, D., Edwards, C.C., Elhaj, C., Escotto, M., Falls, T., Ferraguto, D., Elagar, D., Edwards, C.C., Elhaj, C., Escotto, M., Falls, T., Ferraguto, D., Elagar, D., Edwards, C.C., Elhaj, C., Escotto, M., Falls, T., Ferraguto, D., Flagg, N., Ford, J., Foster, P., Frantz, P., Gabisi, A., Gao, J., Garcia, A., Garner, T., Garzia, N., Gill, R., Gorrell, J.H., Guevara, W., Gunaratne, P., Hale, S., Hamilton, K., Harris, K., Hart, M., Havlak, P., Hawes, A., Hallon, K., Garzia, N., Garzia, A., Garner, T., Garzia, N., Garzia, A., Garner, T., Garzia, N., Garzia, A., Garner, T., Hallon, K., Harth, M., Havlak, P., Hawes, A., Hallon, R., Havlak, P., Hawes, A., Hallon, R., Havlak, P., Hawes, A., Hallon, R., Havlak, P., Hawes, A., Holloway, C., Hallon, R., Harth, M., Holloway, C., Huber, J., Julk, S., Huber, J., Hulyk, S., Hume, J., Jucken, J., Louden, J., Korvah, J., Kovah, J., Ladir, R., Jolivet, S., Homsi, F., Kelly, S., Khan, U., King, L., Korvah, J., Louden, R., Jolivet, S., Karlsson, E., Kelly, S., Khan, U., King, L., Korvah, J., Louler, A., Lundry, N., Leal, B., Lewis, L.C., Lewis, L.C., Kratovic, J., Kureshi, A., Landry, N., Leal, B., Lewis, L.C., Lewis, L., Li, J., Li, Z., Lichtarge, O., Lieu, C., Liu, J., Liu, W., Louler, R., Lucler, R., Martin, Chen, Z., Chowdhry, I., Christopoulos, C., Cleveland, C.D., Cox, C., Coyle, M.D., Dathorne, S.R., David, R., Davila, M.L., Davis, C., Bowie,S., Brieva,M., Brown,E., Brown,M., Bryant,N.F., Buhay,C., Burch,P., Burkett,C., Burrell,K.L., Byrd,N.C., Carron,T.F., Carter,M., Cavazos,S.R., Chacko,J., Chavez,D., Chen,G., Chen,R. Unpublished 3 (bases 1 Direct Submission (bases 1 to 175481) Chen, R.,

REFERENCE AUTHORS

JOURNAL REFERENCE AUTHORS

TITLE

Worley, K.C.

JOURNAL

TITLE

Direct Submission
Submitted (11-SEP-1999) Human Genome Sequencing Center, Department
of Molecular and Human Genetics, Baylor College of Medicine, One
Baylor Plaza, Houston, TX 77030, USA

CE 4 (bases 1 to 175481)

RS Worley, K.C., Adams, C., Adio-Oduola, B., Ali-osman, F.R., Allen, C., Alsbrooks, S.L., Amaratunge, H.C., Are, J.R., Banks, T., Barbaria, J., Benton, J., Bimage, K., Blankenburg, K., Bonnin, D., Bouck, J., Bowie, S., Brieva, M., Brown, E., Brown, M., Bryant, N.P., Buhay, C., Bowie, S., Brieva, M., Brown, E., Brown, M., Bryant, N.P., Buhay, C., Burch, R., Carren, T.F., Carrer, M., Cavazos, S.R., Chacko, J., Chavez, D., Chen, G., Chen, R., Chen, Z., Chowdhry, I., Christopoulos, C., Cleveland, C.D., Cox, C., Carrer, M., Cavazos, S.R., Chacko, J., Chavez, D., Chen, G., Chen, R., Chen, Z., Chowdhry, I., Christopoulos, C., Cleveland, C.D., Cox, C., Coyle, M.D., Dathorne, S.R., David, R., Davila, M.L., Davis, C., Coyle, M.D., Dathorne, S.R., David, R., Davila, M.L., Davis, C., Coyle, M.D., Dathorne, S.R., David, R., Davila, M.L., Davis, C., Coyle, M.D., Dathorne, S.R., David, R., Davila, M.L., Davis, C., Coyle, M.D., Dathorne, S.R., David, R., Davila, M.L., Davis, C., Coyle, M.D., Dathorne, S.R., David, R., Davila, M.L., Davis, C., Coyle, M.D., Chen, R., Delgado, O., Cox, C., Coyle, M.D., Chen, R., Delgado, O., Coyle, M.D., C., Coyle, M.D., Carley, R., Lebanhart, C., Edwards, C., Chen, R., Gorrell, J.H., Gao, J., Garcia, A., Garner, T., Garza, N., Gill, R., Gorrell, J.H., Guevara, W., Gunaratne, P., Hale, S., Hamilton, K., Harris, C., Hart, M., Hogues, M., Holloway, C., Hamilton, K., Harris, C., Hart, M., Hogues, M., Holloway, C., Hall, R., Gorrell, J.H., Guevara, W., Gunaratne, P., Hale, S., Joudah, S., Karlsson, E., Kelly, S., Khan, U., King, L., Korvah, J., Kovah, J., Liu, K., Liu, J., Liu, W., Louier, R., Lunia, R., Martine, R., Oragunye, N., Oviedo, R., Pace, A., Payton, B.,

COMMENT

REFERENCE AUTHORS TITLE

JOURNAL

JOURNAL

Direct Submission

```
SEQUENCING READ COVERAGE: Sequencing is completed to a minimum standard of double strand coverage with a minimum of 2 clones and 2 clones and 3 reads with no ambiguities or 2 chemistries with a minimum of 2 a region does not meet this standard, it will be indicated in the annotation as Low Coverage.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   local mapping efforts.

Repeats are identified using RepeatMasker (A. Smit and P. Green, unpublished.) for Human and Mouse sequences.

Genes and Region of sequence similarity are identified by BLAST (Nuc. Acids Res. 25:3389-3402) similarity (Expect < 1e-34) to the EST and CDNA sequences. Genes demonstrate at least two exons continuity across the splice sites that maintained sequence continuity across the splice functions. Sequences that are not identical matches are annotated as similar.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ANNOTATION OF FEATURES:

STSS are identified using ePCR (Genome Res. 7:541-550) searches of a local database that includes entries from dbSTS, GDB, and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CLONE LENGTH: This sequence does not necessarily represent the entire insert of this clone. Overlapping regions of clones are only sequenced and submitted once, so the sequence for the remainder of Overlapping clones are noted at the beginning and end of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Submitted (01-JUN-2002) Human Genome Sequencing Center, De of Molecular and Human Genetics, Baylor College of Medicin Baylor Plaza, Houston, TX 77030, USA 1070RMATION: http://www.hgsc.bcm.tmc.edu/ or email
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Peery, J., Perez, L., Peters, L., Pickens, R., Primus, E., Pu, L.L., Quiles, M., Ren, Y., Rives, M., Rojas, A., Rojubokan, I., Rolfe, M., Slsson, I., Savery, G., Scherer, S., Scott, G., Shen, H., Shoshtari, N., Stone, H., Sutton, A., Svatek, A., Tabor, P., Tamerisa, A., Tangy, H., Tansey, J., Taylor, C., Taylor, T., Telfrod, B., Thomas, S., Usmani, K., Vasquez, L., Vera, V., Villalon, D., Vinson, R., Wall, R., Wang, S., Ward-Moore, S., Warren, R., Washington, C., Wu, Y., Warren, R., Washington, C., Wu, Y., Wu, C., Wu, Y., Wu, Y.F., Zhou, J., Zorrilla, S., Nelson, D., Infrance S., Meinstock, G. and Gibbs, R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Submitted (29-DEC-2001) Human Genome Sequencing Center, Department of Molecular and Human Genetics, Baylor College of Medicine, One 5 (bases 1 to 175481)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Center, Departmer of Medicine, One
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Tamerisa, K.,
                                                          Db 107605 TCACCAAGGAGGAGCAGGGGGAGATCTTCGGAATCGTGGCCAGCATTCTGCATCTAGGAA 107664
                                                                                                                                                     Qγ
                                                                                                                                                                                         Db 107545
                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                          Db 107425 CTGGAGCGGGCTCTGGACACTTATAGCTACCTGACAGATGGGGTAAGTGGGCAGCCTGGA 107484
                                                                                                                                                                                                                                                                                                                                                                                              Db 107365 TTCCACATCTTCTACCAACTCTTGGCCGGCGCGCGACGAGGCCCCTTCTGCAGGAACTGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Db 107305 ATCCTAAACTATCTGCTGGAAAAGTCGCGAGTGGTGGCTCAAATGGGAGGCGAGCGCAAC 107364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Db 107245 CGGTTCGGCAAGTACATGGACATCCAGTTCGATTTCAAAGGAGCTCCGATCGGAGGCAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Db 107125 ATAGCCGCCTGCTCCGGCAACCAGACGACCGTCGAGGCCGTCAAGGACAAGCTGCTAAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δõ
                                                                                                                                                                                                                           107485 GGGTATTGACAATTGGTCTCTGATCTTCGAGTTCTAATCCACAGCTCAATGGCACCGTGA 107544
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Db 107005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
915 ACATCCACTTTGCTGCTGACGAGGACAGCAATGCCCAGGTTACTACTGAGAACCAGCTCA 974
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        107185 AGCAATCCCGTGCTGGAGGCCTTCGGCAATGCCAAGACAAACCGCAATGACAACTCCTCG 107244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    107065 CTCATCTCCGGAGAGAGTGGTTCCGGCAAGAAGACGCCTCCAAGAAGGTGCTGCAGTTC 107124
                                                                                                                                                                         795 CCTCCATCAACGACCAAGAGTGACTGGAAGGTTATGAGGAAGGCGCTGTCCGTCATTGACT 854
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches 1561; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                            737 TTGGAACGGAACCCCCAGAGCTACTTGTACCTTGGTGAAGGGCCAGTGTGCCAAG-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             377 ATGATTTCTGGAGAGAGTGGGGCAGGCAGGCAAGAGAGACTGCTCCAGTTC 436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 317 TTTGCAGTGGCTGACACTGTATACCGGGCACTTCGTACTGAGCGTCGGGACCAGGCAGTG 376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        misc_feature
                                                                                                   TCACTGAGGATGAAGTGGAGGACTTGCTCAGCATCGTGGCCAGCGTCCTACATCTGGGCA 914
                                                                                                                                          misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                         TTCCACGTCTTTTACCAGCTACTGGAGGGGGGGGGGGGAGGAGGACTCTCCGGTCGGCTGGGC 736
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATTCTCAGTTACCTCCTGGAAAAGTCCCGGGTGGTGCACCAAAATCACGGAGAGCGGAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CGGTTTGGAAAGTACATGGATGTGCAGTTTGACTTCAAGGGTGCCCCCGTGGGAGGCCAC 616
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AGCAACCCCGTGTTAGAGGCCTTTGGGAATGCCAAGACTCTCCGCAACGATAACTCCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TATGCAGAGACCTGCCCAGCCCCTGAACGGGGTGGCGCAGTGCGAGACCGCCTGTTGCAG 496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TTTGCGGTGACTGACAACGCCTTCCGTTCGCTGATCGAGGAGAACCGGGGCCAGTGCGTG 107064
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /note="Calling a C and should /function="polymorphic site" 24987
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /note="Calling a C and /function="polymorphic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /note="Calling a C and should be T"
/function="polymorphic site"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /function="polymorphic 24507
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /note="Calling a C and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /note="Calling a G and /function="polymorphic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /note="Calling a C and should
/function="polymorphic site"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               'note="Calling an A and should
'function="polymorphic site"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       20.5%; Score 749.4; DB 3; 57.1%; Pred. No. 1.3e-177;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0; Mismatches 1081;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  a C and should
                                                                                                                                                                                                                                                                         should be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                should be site"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            site"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             should
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             be A"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 175481;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ţ,
                                                                                                                                                                                                                                                                                                                                                                                                 107424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               107304
```

FEATURES misc_feature misc_feature misc_feature source QUALITY OF INDIVIDUAL BASES:This sequence meets stringent quality standards - estimated error rate less than 1 per 10,000 bases. Reports of lowest quality individual bases and measures of base quality are listed below. Description of the metrics can be found to URL: http://gc.bcm.tmc.edu:8088/quality.info/genbank.annotation. /note="Calling a C and should be
/function="polymorphic site" /note="Calling 'note="Calling a C and 'function="polymorphic /note="Calling a C and /function="polymorphic /clone="RP98-17K17" /organism="Drosophila /db_xref="taxon:7227" /chromosome="3L" Location/Qualifiers should melanogaster' should be T" be H

2047 108792	1994 AGTCACTGTGCCCAGAGACATGGCCCATGTGGGCAGGACGGCCCCAGGATGGTG	Qy Db 1
1993 108732	1934 GCGTGCGCAGAGCTGGCTTTGCCTATCGTCGCAAATATGAGGCTTTCCTGCAGAGGTACA	Qy Db 1
1933 108672	1874 GCTTTGATGAGGTGCTCATCCGACATCAGGTGAAGTACCTGGGACTGATGGAGAATCTGC	Qy Db 1
1873 108612	1814 GGTCTAAGGAGCCTGCCTATATCCGGTGCATCAAGCCAAACGACGCCAAGCAGCCGGGTC	Qy Db 1
1813 108552	1755 GGCCAG-GACGGTGGCCACCCAGTTCAAGATGAGCCTCCTGCAGCTCGTGGAGATCCTGA	Qy Db 1
1754 108492	1695 GCTCAATGAACCCCATCATGGCCCAGTGCTTTGACAAGAGTGAGT	Qy Db 1
1694 108432	1635 CTGGGTTTCTGGATAAAAACAATGACCTCCTCTTCCGGAACCTGAAGGAGACCATGTGCA	Qy Db 1
1634 108372	1575 CCCTAGACCGAGGGGAGTTCCGCCTTCTGCATTATGCTGGAGAGGTGACCTACAGTGTGA	Qy Db 1
1574 108312	1515 CTGTCAAGCCCCACCCTCACTTCCTGACGCACAAGCTCGCTGACCAGAAGACCAGGAAAT	Qy Db 1
1514 108252	1455 AAGAGTGCCTGCGTCCTGGGGAGGGCCACGGACCTGACCTTTCTGGAGAAGTTGGAGGACA	Qy Db 1
1454 108192	1395 ACAAGATCATCTGTGACCTGGTAGAGGAGAAGTTCAAGGGCATCATCTCCATCTTGGATG	Qy Db 1
1394 108132	1335 CGGAGCAGGAGGATACGAGGCTGAGGGCATCGCGTGGGAACCTGTCCAGTACTTCAACA 	Qy Db 1
1334 108072	1275 TCTGCATCAACTACTGCAATGAGAAGCTGCAGCAGCTCTTCATCGAGCTGACTCTCAAGT	Qy Db 1
1274 108012	1215 TICTTGGGCTCCTGGACATTTACGGCTTTGAAGTGTTTCAGCATAACAGCTTCGAGCAGT	Qy Db 1
1214 107952	1155 AGATCAATAGGTCACTGGCCTCTAAGGACGCTGAGAGCCCCAGGCTGGCGAAGCACCACGG	Qy Db 1
1154 107901	1095 ATGCAAGGGATGCGCTTGCCAAGGCTGTGTACAGCCGGACATTCACCTGGCTGG	Qy Db 1
1094 107841	1035 GGAAGATCATCGCCAAGGGGGAAGAGCTCCTGAACCTGAACCTTGAACAGGCGGCAT	Оу рь 1
1034 107781	975 AATATCTGACCAGGCTCCTTGGTGTGGAAGGTACACACTTAGGGAAGCCCTGACCCACA	Qy Db 1
107721	107665 ACGTTGGCTTCACTGAGGTGGAGGGCAATGCCAAGGTGAACAGCAGGGATCTGGTAG	Db 1

ACCESSION

AC005847 268369 bp DNA linear INV 22-OCT-1998 Drosophila melanogaster DNA sequence (P1s DS03179 (D226), DS06357 (D230), DS03404 (D231), DS06962 (D232), and DS07291 (D240)), complete sequence AC005847 AC004331 AC004436 AC004334 AC004488 AC004489

RESULT AC0058, LOCUS DEFINIO	Qу рь 1	Qy Db 1	Qy Db 1	Qy Db 1	Qy Db 1	Qy Db 1	Qy Db 1	Qy Db 1	Qy Db 1	Qy Db 1	Qy Db :	Qy Db 1	Qy Db 1	Qy Db 1	Qy Db 1	Qу рь 1
RESULT 15 AC005847/c LOCUS DEFINITION	2936 109693	2876 109633	2819 109573	2759 109513	2699 109453	2648 109393	2588 109333	2528 109273	2468 109213	2408 109153	2348 109093	2288 109033	2228 L08973	2168 108913	2108 L08853	2048 L08793
268369 bp DNA linear INV 22-OCT-1998 ACOO5847 268369 bp DNA linear INV 22-OCT-1998 V Drosophila melanogaster DNA sequence (Pls DSO3179 (D226), DSO6357 (D230), DSO3404 (D231), DSO6962 (D232), and DSO7291 (D240)),	GAGATGTGGTGCAGAGTGATCATGTGATCGAG 2970 	GTAGCCTGAGTGATAGCCTATTTGTGCTTCACGTGCAGCGTGAAGAACAACAAGCAGAAGG 2935	AGGATGCTAAAGTCAAGCAGAGAATTGATTATGCCAACCTAACCGGAATCTCTGTCA 2875	AGGGTTACAAGCCTCGCCCCCGGCAGCTGCTGCTCACGCCCAGTGCTGGTCATTGTGG 2818	TTCAATCCTTGGGCTCTGAACCCATCCAGTATGCCGTGGCCGTGGTAAAATACGACCGTA 2758	GACTCTTCATTAGCACACGGCTTGGCACAGAGGAGATCAGCCCCAGAGTGC 2698	AGGCGGTGGCTAGTGAAATTTTCAAGGGCAAGAAGAAGGACAACTACCCCCAGAGTGTCCCCA 2647	ACATGGTGTGGAAGTACTGCCGGAGCATCAGCCCTGAGTGGAAGCAGCAGCTGCAGCAAA 2587	CCACACCCCCACCTGCCCTGAGAGAGGGCCTCAGAACTGCTACGGGAACTGTGCATGAAGA 2527	CCTCATTTTTGCTTAACCTGAGGCGGCAACTGCCCCGGAATGTTCTGGACACCTCCTGGC 2467	TCATTTTGCGCCATTCACCCCGGTGCCCTGAGAATGCCTTCTTCTTGGACCACGTGCGCG 2407	GGAGGAAGGCAAGAGGAAGTGGGCAGGCCAGACCATCCGTCGACTCATCCGTGGCT 2347	TTCTCCGGGTGAAGCGATCAGCCATCTGTATCCAGTCATGGTGGCGTGGCACACTGGGCC 2287	GGCAGAGTCTAGCCACCAAGATCCAGGCGGCCTGGAAGGGGCTTTCATTGGCGACAGAAAT 2227	AGATETTCATCCGGATTCCCCAAGACCTTATTTGCCACAGAGGACTCCCTGGAAGTCCGGC 2167	TGGCCGTGTTGGTCAGACCCTCGGCTACAAGCCAGAAGAGTACAAAATGGGCAGGACTA 2107

```
Db 118541 ATAGCCGCCTGCTCCGGCAACCAGACGACGGCGTCGAGGGCCTCAAGGACAAGCTGCTAAAG 118482
                                                                                                                                             Db 118601 CTCATCTCCGGAGAGAGTGGTTCCGGCAAGAGGAGGCCTCCAAGAAGGTGCTGCAGTTC 118542
                                                                                                                                                                                                                                                                                              Db 118661 TTTGCGGTGACTGACAACGCCTTCCGTTCGCTGATCGAGGAGAACCGCGGCCAGTGCGTG 118602
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity
Matches 1561; Conserva
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE
JOURNAL
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VERSION
KEYWORDS
                                                                                                                                                                                             317 TTTGCAGTGGCTGACACTGTATACCGGGCACTTCGTACTGAGCGTCGGGACCAGGCAGTG 376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM
                                                                            TATGCAGAGACCTGCCCAGCCCCTGAACGGGGTGGCGCAGTGCGAGACCGCCTGTTGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AL Submitted (22-OCT-1998) Berkeley Drosophila Genome Project, MS 64-121, Lawrence Berkeley National Laboratory, One Cyclotron Road, Berkeley, CA 94720, US Sequence submitted by:
Berkeley Drosophila Genome Project
Lawrence Berkeley National Laboratory, MS 64-121
For further Information about this sequence, including its location and relationship to other sequences, please visit our sequence bendutely, CA 94720
archive Wab site (http://www.fruitfly.org/sequence/) or send email to bdgp@fruitfly.berkeley.edu.
Library locations: 11-34, 21-67, 44-36, 73-50, 92-76.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RS Celniker, S.E., George, R.A., Galle, R.E., Hoskins, R.A.,

Svirskas, R.R., Harris, M.L., Agbayani, A., Arcaina, T.T., Baxter, E.,

Blazej, R.G., Chewe, M., Doyle, C.M., Farfan, D.E.,

Kim, S.H., Lee, B., Lomotan, M.A., Mak, J., Mazda, P., Moshrefi, A.R.,

Moshrefi, M., Nixon, K.A., Pacleb, J.M., Park, S., Peiffer, B., Punch, E.,

Scil, E., Twomey, B., Wan, K.H., Zhang, R., Zieran, L.L., and Rubin, G.M.,

Sequencing of Drosophila chromosome 3L, region 6173-62A2

(Inpublished (1997)

(Eg (bases 1 to 268369)

(Celniker, S.E., George, R.A., Galle, R.F., Hoskins, R.A.,

Blazej, R.G., Chavez, C., Chew, M., Doyle, C.M., Farfan, D.E.,

Kim, S.H., Lee, B., Lomotan, M.A., Mak, J., Mazda, P., Moshrefi, A.R.,

Snir, E., Twomey, B., Wan, K.H., Zhang, R., Karra, K., Kearney, L.,

Moshrefi, M., Nixon, K., Pacleb, J.M., Park, S., Pfeiffer, B., Punch, E.,

Snir, E., Twomey, B., Wan, K.H., Zhang, R., Zieran, L.L. and Rubin, G.M.,

Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /Clone="913 D803179 (D226), D806357 (D230), D803404 (D231), D806962 (D232), and D807291 (D240)" (D240)" (D240)" (D806962 (D232), and D807291 (D240)" (D240)" (D806962 (D232), and D807291 (D240)" (D806962 (D80696
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Drosophila melanogaster (Subclones in tet from P1 clones DS03179 (D226), DS06357 (D230), DS03404 (D231), DS06962 (D232), and DS07291
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AC005847.1
HTG.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1. .26836 VORTH MEDIAN PROPERTY (ABANCHE TEXON: 7227 Chromosome="3L"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       20.5%; Score 749.4; DB 3; 57.1%; Pred. No. 1.4e-177; Live 0; Mismatches 1081;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GI:3779012
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 268369;
                                                                                                                                                                                                                                                                                                                                                                                                                                                       93; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                           7;
```

117473 AGGAGT	117533	117593 CGGAGCAGTACCGCCGGGGGCATCGCGTGGGAACCTGTCCAGTACTTCAACA 1394 117593 CGGAGCAGGATACCGCCGGGGAGGGCATCGAGTACCTGTGGAGTACTTCAACA 1394 1395 ACAAGATCATTTCATC	**************************************	1215 TTCTTGGCTCCTGGACATTTACGGCTTTGAAGTGTTTCAGCATAACAGCTTCGAGCAGT 1274 117713 TGATGGCATTCTGGACATCTATGGCTTCGAGATCTTCCAGAAGAGCTTTGAGCAGT 11765	1155 AGATCAATAGGTCACTGGCCTCTAAGGACGCTGAGAGCCCCAGCTGGCGAAGCACCACGG 1214	QY 1095 ATGCAAGGGATGCGCTTGCCAAGGCTGTGTACAGCAGCAGCATCT 117825	QY 1035 GGAAGATCATCGCCAAGGGGGAAGAGCTCCTGAGCCCCCCTGAACCTTGAACGCACC 117885 Db 117884 GCACAATTGACGCTCGGGGAAGATCTTGGTGAACTTGAACTTGAACAGGCGGCAT 1094	Qy 975 AATATCTGACCAGGCTCCTTGGTGTGAAAGGTACAACACTTAGGGAAGCCTTGGTAG 117945 Db 117944 TCACCGCTTGGTTGGTGTGAAAAGCCAAAGCGAACTCTAAGGGAAGCCCTGACCCACA 1034 Db 117944 TCACCGCTGCTTGCTTGGTGTAAAAGCCAAAGCGAACTCTAACTAACTCTAACTCTAACTCTAACTCTAACTCTAACTCTAACTCTAACTCTAACTCTAACTCTAACTAACTCTAACTCTAACTCTAACTCTAACTCTAACTCTAACTCTAACTCTAACTCTAACTCTAACTAACTCTAACTCTAACTCTAACTCTAACTCTAACTCTAACTCTAACTCTAACTCTAACTCTAACTAACTCTAACTCAACTCTAACTCTAACTCAACTCTAACTCTAACTCTAACTCAACTCTAACTCAACTCTAACTCAACTCAACTCAACTCAACTCAACTCAACTCTAACTCAACTCTAACTCAACTCAAC	QY 915 ACATCCACTTTGCTGTGACGAGACAGCAATCTCGCACTCTAGGAA 118002 Db 118001 ACGTTGGCTTCACTGAGGTGGAGGACAGCCAATGCCCAGGTTACTACTAGAAACCAGCTCA 974	855 TCACTGAGGATGAGGAGGACTTCAAGCAGGTCCAGCAGGCTTCCACTGTGATCGATT 11 1	CAATGGC,	791	QY 737 TIGGAACGCAACCCCCAGAGCTACTTGTACCTGGTGAAGGGCCAGGGAACTGCGC 118242 Db 118241 CTGGAGCGGCTCTGGAACACTTTGTACCTGGTGAAGGGCCAGTGTGCCAAG 790	QY 677 TTCCACGTCTTTTACCAGCTACTGGAGGGGGGGGGGGGG	OY 617 ATTCTCAGTTACCTCCTGGAAAAGTCCCGGGTGGTGCACCAAAATCACGGAGGGAAC 118362 Db 118361 ATCCTAAACTATCTGCTGGAAAAGTCGCGGAGTGCTGCACCAAAATCACGGAGAGCGGAAC 676	QY 557 CGGTTTGGAAAGTACATGGATGTGGAGTTTGACTTCAAGGGTGCCCCCGTGGĞAGGCCAC 616 Db 118421 CGGTTCGGCAAGTACATGGACATTCAAGTTTGACTTCAAGGGTGCCCCCGTGGĞAGGCCAC 616	Qy 497 AGCAACCCGGTGTTAGAGGCCTTTGGGAATGCCAAGACTCTCCGCAACGATAACTCCAGC 556 Db 118481 AGCAATCCCGTGCTGGAGGCCTTCGGCAATGCCAACGATAACTCCAGC 556

Ş

DЬ

Š

В

S	16513 GTA 2468 CCA	2348 TCA 116573 TCA	7 2288 GGA 1 5 116633 AGC	2228 TTC	2168 GGC	/ 2108 AGATO 116813 AACT	2048 TGG	, 1994 AGT	1934 GCG' 116993 GTG'	/ 1874 GCTTT 117053 TCTTC	7 1814 GGTV 5 117113 TGTV	7 1755 GGCC 117173 GTCC	/ 1695 GCTCAA 	/ 1635 CTG	7 1575 CCCT 5 117353 TCAT	7 1515 CTG 5 117413 AAT
	TGTGGCTGCTGGCGAGGGGCTCA CACCCCCACCTGCCCTGAGAGAGGCCTCA	TTTTGCGCCATTCACCCCGGTGCCCTGAC	GGAAGGCAGCCAAGAGGAAGTGGGCAGCCC 	TCCGGGTGAAGCGATCAGCCATCTGTATCC	AGAGTCTAGCCACCAAGATCCAGGCGGCCTG	CTTCATCCGATTCCCCAAGACCTTAT	GCCGTGTTGGTCAGACACCTCGGCTACAAGCCAGAAGAG	FCACTGTGCCCAGAGACATGGCCCAT	TGCGCAGAGCTGGCTTTGCCTATCGTV 	GATGAGGTGCTCATCCGACATCAGGTV 	TCTAAGGAGCCTGCCTATATCCGGTGCATCAAGCCAAACGACGCCA 	CAG-GACGGTGGCCACCCAGTTCAAGA1 	TGAACCCCATCATGGCCCAGTGCTTT	GGTTTCTGGATAAAAACAATGACCTCCTCT	AGACCGAGGGGAGTTCCCCCTTCTGCATT	TCAAGCCCCACCCTCACTTCCTGACGCA
-		CCTTCTTCTTGGACCAC 	AGACCATCCGTCGACTCATCCGTGGCT	AGTCATGGTGGCGTGGCACACTGGGCC	GAAGGGGCTTTCATTGGCGACAGAAAT	TTGCCACAGAGGACTCCCTGGAAGTCCGGC	ZAGAAGAGTACAAAATGGGCAGGACTA 	CATGTGGGCAGGACGGCCCCAGGATGGTG	CGCAAATATGAGGCTTTCCTGCAGAGGTACA	GAAGTACCTGGGACTGATGGAGAATCTGC	AGCCAAACGACGCCAAGCAGCCGGTC	GAGCCTCCTGCAGCTCGTGGAGATCCTGA	TGACAAGAGTGAGCTCAGTGACAAGAAGC	TCCGGAACCTGAAGGAGACCATGTGCA	ATGCTGGAGAGGTGACCTACAGTGTGA	CAAGCTCGCTGACCAGAAGACCAGGAAAT
116394	1645	2407 116514 2467	2347 116574	2287 116634	2227 116694	2167 116754	2107 116814	2047 116874	1993 116934	1933 116994	1873 117054	1813 117114	1754 117174	1694 117234	1634 117294	1574 117354

Q D D

8 d 8

ОУ ОУ ОУ B 6

11

당 양

g qq

В

04 07 07 07 07 07

```
밁
                                                                                                         δõ
                                                                                                                                             DЬ
                                                                                                                                                                                                                                                       Qy
                                                                                                                                                                                                                                                                                              Дb
                                                                                                                                                                                                                                                                                                                              Qy
                                                                                                                                                                                                                                                                                                                                                                      Ър
                                                                                                                                                                                                                                                                                                                                                                                                      Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                          Db 116333 AGGTCCTGGCGGAGAAGGTCTTTAAGGGCAAGAACAACTACGCGAGCAGTGTGTCCA 116274
                                                                       Db 116033 CGAACCACAACGACCTGATGGTCATCCGCATACCGCTCGACCTGAAAAAGGACAAGG 115974
                                                                                                                                                                                                                 116213 CCAGCACCTTCGGCAGCGAGCAGCTTAAGTACCAGTCCTTCTGCACCAAGTTCGATCGGC 116154
                                                                                                                                                                                                                                                                                                                                                                  116273 CTTGGTTCCAGGAGGACCGCATCCCCAAGGAGCACATCCAGCGAGTCAACGACTTCGTGG 116214
                                                                                                                                                                                                                                                                                                                                                                                                      2648 GACTCTTCATTAGCACACGCCTTGGCACAGAGGAGA------TCAGCCCCAGAGTGC 2698
                                                                                                                                                                                                                                                                                                                            2699 TTCAATCCTTGGGCTCTGAACCCATCCAGTATGCCGTGCCCCGTGGTAAAATACGACCGTA 2758
                                 2936 GAGATGTGGTGCTGCAGAGTGATCATGTGATCGAG 2970
                                                                                              2876 GTAGCCTGAGTGATAGCCTATTTGTGCTTCACGTGCAGCGTGAAGACAACAACAAGCAGAAGG 2935
```

Search completed: December 9, 2002, 14:35:45 Job time : 7405 secs.

• 3 • •			
•			•
^			
		i	
	,		

<u>.</u>

```
Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Minimum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Total number
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Maximum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9n:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB
DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          of hits satisfying chosen parameters:
   N_Geneseq_101002:*

1: /SIDS2/gcgdata/ge
2: /SIDS2/gcgdata/ge
3: /SIDS2/gcgdata/ge
6: /SIDS2/gcgdata/ge
6: /SIDS2/gcgdata/ge
8: /SIDS2/gcgdata/ge
9: /SIDS2/gcgdata/ge
10: /SIDS2/gcgdata/ge
11: /SIDS2/gcgdata/i
12: /SIDS2/gcgdata/i
13: /SIDS2/gcgdata/i
14: /SIDS2/gcgdata/i
15: /SIDS2/gcgdata/i
16: /SIDS2/gcgdata/i
17: /SIDS2/gcgdata/i
18: /SIDS2/gcgdata/i
19: /SIDS2/gcgdata/i
20: /SIDS2/gcgdata/i
21: /SIDS2/gcgdata/i
22: /SIDS2/gcgdata/i
23: /SIDS2/gcgdata/i
24: /SIDS2/gcgdata/i
25: /SIDS2/gcgdata/i
26: /SIDS2/gcgdata/i
27: /SIDS2/gcgdata/i
28: /SIDS2/gcgdata/i
29: /SIDS2/gcgdata/i
20: /SIDS2/gcgdata/i
21: /SIDS2/gcgdata/i
23: /SIDS2/gcgdata/i
24: /SIDS2/gcgdata/i
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      IDENTITY_NUC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-09-893-371-3
3661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2185239 seqs, 1125999159 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           December
| SIDS2/gcgdata/geneseq/geneseqn-embl/NA1980.DAT: *
| SIDS2/gcgdata/geneseq/geneseqn-embl/NA1980.DAT: *
| SIDS2/gcgdata/geneseq/geneseqn-embl/NA1982.DAT: *
| SIDS2/gcgdata/geneseq/geneseqn-embl/NA1983.DAT: *
| SIDS2/gcgdata/geneseq/geneseqn-embl/NA1983.DAT: *
| SIDS2/gcgdata/geneseq/geneseqn-embl/NA1984.DAT: *
| SIDS2/gcgdata/geneseq/geneseqn-embl/NA1985.DAT: *
| SIDS2/gcgdata/geneseq/geneseqn-embl/NA1986.DAT: *
| SIDS2/gcgdata/geneseq/geneseqn-embl/NA1986.DAT: *
| SIDS2/gcgdata/geneseq/geneseqn-embl/NA1987.DAT: *
| SIDS2/gcgdata/geneseq/geneseqn-embl/NA1989.DAT: *
| SIDS2/gcgdata/geneseq/geneseqn-embl/NA1990.DAT: *
| SIDS2/gcgdata/geneseq/geneseqn-embl/NA1990.DAT: *
| SIDS2/gcgdata/geneseq/geneseqn-embl/NA1991.DAT: *
| SIDS2/gcgdata/geneseq/geneseqn-embl/NA1991.DAT: *
| SIDS2/gcgdata/geneseq/geneseqn-embl/NA1993.DAT: *
| SIDS2/gcgdata/geneseq/geneseqn-embl/NA1994.DAT: *
| SIDS2/gcgdata/geneseq/geneseqn-embl/NA1999.DAT: *
| SIDS2/gcgdata/geneseq/geneseqn-embl/NA2000.DAT: *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ggagcggggcgccgggtccg.....ccacctgcaccttttagcca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GenCore version
Copyright (c) 1993 - 2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9, 2002, 11:25:50; Search time 485 Seconds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    16999.105 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (without alignments)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5.1.3
Compugen Ltd
```

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIE

•		æ				
Result		Query	•			
No.	Score	Match	Match Length DB		ID	Description
_	2759.4	75.4	4202	22	AAI59147	Human polynucleoti
2	2549	69.6	3392	23	AAS74358	DNA encoding novel
w	1492	40.8	3771	23	AAS74359	DNA encoding novel
4	1144.8	31.3	1727	22	AAI60933	Human polynucleoti
տ	875.2	23.9	3406	23	ABL19551	Drosophila melanog
6	873.8	23.9	3349	23	ABL04915	Drosophila melanog
7	749.4	20.5	6483	23	ABL19550	Drosophila melanog
8	749.4	20.5	7057	23	ABL04914	Drosophila melanoq
9	745.2	20.4	2560	22	AAH02967	Human shear stress

DNA encoding novel	AAS71357	23	3779	6.0	218.4	45	
DNA encodi	AAS76357	23	6237		219	44	
Gene MYHll differe	ABK35570	24	5574		224.2	43	
Drosophila melanog	ABL12023	23	6390		226.6	42	
Human protein enco	AAH99691	22	6655		227.2	41	a
	ABV27980	23	2486		227.6	40	C
Human prostate exp	ABV22140	23	2486	6.2	227.6	39	c
\circ	AAC77011	21	789		233.4	38	
	AAH98321	22	6607		235	37	C
Coding sequence fo	AAT34291	17	6175	6.5	236.8	36	
Novel human coding	ABN59632	24	7794		238	35	
DNA encoding novel	AAS65910	23	7736		246.4	34	
Bowine embryonic g	ABN73548	24	511		249.6	ω ω	
DNA encoding novel	AAS78835	23	5094		250	32	
Human cDNA differe	ABK84726	24	2711		253.6	31	
DNA encoding novel	AAS67617	23	2349		253.6	30	
Human non-conventi	AAT35761	17	1405	7.1	260	29	
=	AAS80792	23	2026	7.5	274	28	
Novel human coding	ABN59671	24	3757	7.5	274.6	27	
	AAK52272	22	4515	7.5	276.4	26	
Human polynucleoti	AAK53256	22	4459	7.6	278	25	
Drosophila melanog	ABL07105	23	6733	7.7	282	24	
Human polynucleoti	AAK52971	22	8486		283.8	23	
Human polynucleoti	AAK51987	22	7516		283.8	22	
Human non-conventi	AAT35762	17	2092		293.6	21	
Human prostate can	AAF16208	21	1712	8.3	305.2	20	
Human colon cancer	AAH34495	22	1636		305.2	19	
Human ORFX ORF2415	AAC76860	21	1605	8.9	325	18	
Gene #3358 used to	ABN96860	24	7465		342.4	17	
DNA encoding novel	AAS84797	23	3588	•	361.4	16	
Human DNA sequence	AAS94850	24	4760	10.5	385.2	15	
	AAF32774	22	2263		450.6	14	a
DNA encoding human	ABK52205	24	3617	12.6	460.8	13	
cDNA encoding nove	AAS40998	22	3332		506.2	12	
—	AAS40995	22	3400	13.9	507.4	1	
Drosophila melanoq	ABL28593	23	3874	13.9	510.6	10	

ALIGNMENTS

RESULT 1 AAI59147 21-JAN-2000; 25-APR-2000; 09-JUL-2000; 19-JUL-2000; 19-AUG-2000; 14-SEP-2000; 19-OCT-2000; Human; nootropic; immunosuppressant; cytostatic; gene therapy; cancer; peripheral nervous system; neuropathy; central nervous system; CNS; Alzheimer's; Parkinson's disease; Huntington's disease; haemostatic; amyotrophic lateral sclerosis; Shy-Drager Syndrome; chemotactic; chemokinetic; Human polynucleotide SEQ ID NO 1350 AAI59147 standard; cDNA; 4202 26-DEC-2000; 2000WO-US34263 WO200153312-A1 Homo sapiens. 22-OCT-2001 (first entry) 26-JUL-2001. leukaemia; SS. 2000US-0488725. 2000US-0552317. 2000US-0598042. 2000US-0620312. 2000US-0653450. 2000US-0662191. 2000US-0693036. thrombolytic; drug screening; arthritis; inflammation; ВP

(HYSE-) HYSEQ INC

29-NOV-2000; 2000US-0727344.

```
The invention relates to human nucleic acids (AAI57798-AAI61369) and CCC thmeunosuppressant and cytostatic accivity. The polynucleotides are useful CC in gene therapy. A composition containing a polypeptide or polynucleotide CC system, such as peripheral nervous injuries, peripheral nervous CC alzheimer's, parkinson's disease, injuries, peripheral nervous CC alzheims of the activity and central nervous system disease, such as CC activity. Activities and central nervous system disease, such as CC atteral sclerosis, and Shy-Drager Syndrome, other uses include the CC utilisation of the activity, chemotactic/chemokinetic activity, haemostatic CC assays for receptor activity, cancer diagnosis and therapy, drug screening, CC assays for receptor activity, arthritis and inflammation, leukaemias and CC Note: The sequence data for this patent did not form part of the printed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              524 AATGCCAAGACTCTCCGCAACGATAACTCCAGCCGGTTTGGAAAGTACATGGATGTGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity 86.4%;
Matches 3116; Conservative
                                                                                                         464 CGGGGTGGCGCAGTGCGAGACCGCCTGTTGCAGAGCAACCCCGTGTTAGAGGCCTTTGGG 523
                                                                                712 céccion de modernic de construcción de con
                                                                                                                                                                     652 AAGACCGAGGCCAAGAAGCTGCTGCAGTTCTATGCAGAGACCTGCCCAGGCCCCCCAA 711
                                                                                                                                                                                              404 AAGACAGAGGCCACCAAGAGACTGCTCCAGTTCTATGCAGAGACCTGCCCAGCCCCTGAA 463
                                                                                                                                                                                                                                                           344 GCACTTCGTACTGAGCGTCGGGACCAGGCAGTGATGATTTCTGGAGAGAGTGGGGCAGGC 403
                                                                                                                                                                                                                                                                                                                                                   532 GGCGTCAGCTTCTATGAAGTGCCCCCTCACCTGTTTGCCGTGGCGGACACTGTGTACCGA 591
                                                                                                                                                                                                                                                                                                                                                                            284 GGTGTCAGTTTCTATGAAGTACCACCTCATTTGTTTGCAGTGGCTGACACTGTATACCGG 343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   224
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      412
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 4202 BP; 919 A; 1228 C; 1267 G; 788 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    44 GCCCTGGGCAGTGACGGGGTTCGAGTGACCATGGAGAGCGCCTTGACTGCCCGAGACCGG 103
                                                                                                                                                                                                                                                                                                                                                                                                                                        TerereAareeeraceggácergeagareracageeggágcararggagegrrácegr 531
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TCTGTGAATGCCTACGGAGAGCTACAGATCTACAGGCGGCAGCATATGGAACGCTACCGT 283
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Claim 1; SEQ ID NO 1350; 10078pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AACCTCCGGCGGCGGTTCCGGGAGAACCTCATTTATACCTACATCGGTCCTGTCCTAGTC 223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Novel nucleic acids and polypeptides, useful for treating disorders such as central nervous system injuries -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AACCTGCGGCGGATTTCGGGAGAATCTCATCTACACCTACATTGGCCCCGTCCTGGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 2001-442253/47.
P-PSDB; AAM39991.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GCCCTGGGCAGTGACGGGTTCGGGTGACCATGGAGAGTGCGCTCACCGCCCGTGACCGG 351
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A, L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Wang Z,
Zhou P,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Asundi V, Chen R, Ma Y, Wehrman T, Xu C, Xue AJ, Goodrich R, Drmanac RT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 2759.4; DB 22; Length 0; Mismatches 481; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Qian XB,
Yang Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ren F, 1
Zhang J;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4202;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Wang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         D;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                6;
В
                                   γ
                                                                                  Ъ
                                                                                                                           Qγ
                                                                                                                                                                          DЪ
                                                                                                                                                                                                             Qy
                                                                                                                                                                                                                                                                Ъ
                                                                                                                                                                                                                                                                                                   γQ
                                                                                                                                                                                                                                                                                                                                                DЪ
                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                   只
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
```

Дb δδ В Ş В δÃ Db Ş В Ş Db Ş DЬ á DЬ

Db Db 11 Oy Db 1 Oy Db 11 Oy 100 Db 1125 Oy 102 Db 1372 Oy 103 Db 1372 Oy 104 Db 1372 Oy 106 Db 1372 Oy 1184 Db 1372 Oy 1184 Db 1492 Oy 1244 Db 1492 Oy 1744 Db 1492 Oy 1304 Db 1492 Db 1492 Oy 1304 Db 1492 D	,
584 T; 832 T; 644 CG 644 CG 704 GGC 704 GGC 704 GGC 705 GGC 705 GGC 706 GGC 706 GGC 707 GGC 1111 952 GGC 706 GGC 1111 972 GGC 44 AATGC 44 AATGC 44 AATGC 46 GGC 47	
CCAAACCTAAACCCTAAAACCTAAAAACCTAAAAACCTAAAAACCTAAAAACCTAAAAACCTAAAAACCTAAAAACCTAAAAACCTAAAAAA	
TYCAAGGTTCCGGAACGATACTCCA TYCAAGGTTGCCCCCCGTGGGAGGACGACACTCCATTGCACGAGATACTCCA TYCCAAGGTTGCCACACAATCCACGGAGACCCGAAAATCACGGAGACCGGAAATCACGGAGACCGGAAATCACTGGGAACCGGAAATCACTGGGAACCGGAAATCACTGGGAACCGGAAATCACTGGGAACCGGAAATCACTGGGAACCGGAAATCATGGGAACCGGAAACCTCTCCGGAAGGCCTCTACATTGGCAAGTCTCCGGAAGGCCTCTACATTGGCAACTCTCCGAAGGCCTCTACATTGGCAACTCTCCGAAGGCCTCTACATTGGCAACTCTCCACACTCATTGACTATTGGCAACTCTCACTCA	
CICCAGCAC LOCATION CIGGEACTE LILLIA CIGGEACTE CIGGAACTE CIGGAACTE CIGGAACTE CITCACCT CITCACCT CITCACCT CITTACACCT CITTACACAC CITTACACCT CITTACACCT CITTACACC CITTACACC CITTACAC CITTACAC CI	
CICCACCAGGTTCGGAAGTACA GIGCACATTCTCAGGTTCGGAAGTACA GIGCACATTCTCAGGTTCCCCC GGCCACCACCCCCAGTCTTTTACCA LILILILILILILILILILILILILILILILILILIL	
GAAA CTAG	
STEGGAG 831 AAAGTCC 643 AAAGTCC 643 AAAGTCA 891 27GGAG 951 77GGAG 951 77GGAG 951 77GGAG 1011 3GAAG 1071 3GAAG 1071 3GAAG 1071 3GAAG 1071 3GAAG 1121 111 2AGC 943 111 2AGC 943 111 2AGC 1191 3GAAG 1123 111 2AGC 1191 3GAAG 1123 111 2AGC 1191 3AGC 119	

٠.

, 3

```
рb
                                                                                                                                                                                                                    δõ
                                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                           QΥ
                                                                                                                                                                                                                                                                                                                                                                                           δõ
                                                                                                                                                                                                                                                                                                                                                                                                                DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                            Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                              δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δ
          Ş
                                            δÃ
                                                                 д
8
                                                                                                밁
                                                                                                                Ş
                                                                                                                                Ъ
                                                                                                                                               Ş
                                                                                                                                                                      В
                                                                                                                                                                                  Qy
                                                                                                                                                                                                        망
                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                      Ωy
                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
엉
                           Db
                                                                                                    2752
                                                                                                                                     2692
                                                                                                                                                    2443
                                                                                                                                                                      2632
                                                                                                                                                                                                        2572
                                                                                                                                                                                                                          2323
                                                                                                                                                                                                                                           2512
                                                                                                                                                                                                                                                                            2452
                                                                                                                                                                                                                                                                                             2203
                                                                                                                                                                                                                                                                                                              2392
                                                                                                                                                                                                                                                                                                                              2143
                                                                                                                                                                                                                                                                                                                                              2332
                                                                                                                                                                                                                                                                                                                                                               2083
                                                                                                                                                                                                                                                                                                                                                                               2272
                                                                                                                                                                                                                                                                                                                                                                                                2023
                                                                                                                                                                                                                                                                                                                                                                                                                  2212
                                                                                                                                                                                                                                                                                                                                                                                                                                                    2152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1903
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2092
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2032
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1783
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1972
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1664
2932
                2683
                                                 2623
                                                                  2812
                                                                                   2563
                                                                                                                    2503
                                                                                                                                                                                                                                                           2263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1843
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1912
                                                                                                                                                                                                                                                                                                                                            CGCAAATATGAGGCTTTCCTGCAGAGGTACAAGTCACTGTGCCCAGAGACATGGCCCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CTCTTCCGGAACCTGAAGGAGACCATGTGCAGCTCAATGAACCCCATCATGGCCCAGTGC
                              CTGCTACGGGAACTGTGCATGAAGAACATGGTGTGGAAGTACTGCCGGAGCATCAGCCCT
                                                                                                                                                                      GCCTTCTTCTTGGACCACGTGCGCGCCTCATTTTTGCTTAACCTGAGGCGGCAACTGCCC
                                                                                                                                                                                                                                                                                                                                                                              TGGGCAGGACGCCCCAGGATGGTGTGGCCGTGTTGGTCAGACACCTCGGCTACAAGCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TTTGACAAGAGTGAGCTCAGTGACAAGAAGCGGCCAG-GACGGTGGCCACCCAGTTCAAG
                                                                                                                                            CGGAATGTTCTGGACACCTCCTGGCCCACACCCCCACCTGCCCTGAGAGAGGCCCTCAGAA
                                                                                                                                                                                                                 ACCATCCGTCGACTCATCCGTGGCTTCATTTTGCGCCATTCACCCCGGTGCCCTGAGAAT
                                                                                                                                                                                                                                         TCATGGTGGCGTGGCACACTGGGCCGGAGGAAGGCCAAGAGAGAAGTGGGCAGCCCAG
                                                                                                                                                                                                                                                                                    AGGGGCTTTCATTGGCGACAGAAATTTCTCCGGGTGAAGCGATCAGCCATCTGTATCCAG
                                                                                                                                                                                                                                                                                                           GTGAAGTACCTGGGACTGATGGAGAATCTGCGCGTGCGCAGAGCTGGCTTTTGCCTATCGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ATCAAGCCAAACGACGCCAAGCAGCCGGGTCGCTTTGATGAGGTGCTCATCCGACATCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATCAGCCCCAGAGTGCTTCAATCCTTGGGCTCTGAACCCATCCAGTATGCCGTGCCCGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                   GTGAAGTACCTGGGGCTGTTGGAAAACCTGCGCGTGCGCAGAGCCGGCTTTGCCTATCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATCAAACCCAATGATGCCAAACAGCCCGGCCGCTTTGACGAGGTGCTGATCCGCCACCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATGAGCCTCCTGCAGCTGGAGATCCTGCAGTCTAAGGAGCCCGCCTACGTCCGCTGC
ATCAGCCCCGAGTGCTGCAGGCCTTGGGCTCTGAGCCCATTCAGTATGCGGTGCCTGTT
                                                                                                                                    ACCATCCGGCGCCTCATCCGAGGCTTCATCCTGCGCCACGCCCCCCCGCTGCCCCGAGAAC
                                                                                                                                                                                                                                                                           AGGGGCTTTCACTGGCGGCAGAAATTCCTCCGGGTGAAGAGATCAGCCATCTGCATCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1723
                                                                                 2622
                                                                                                                                                                                       2442
                                                                                                                                                                                                                                                                                            2262
                                                                                                                                                                                                                                                                                                             2451
                                                                                                                                                                                                                                                                                                                             2202
                                                                                                                                                                                                                                                                                                                                              2391
                                                                                                                                                                                                                                                                                                                                                                                                2082
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2091
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1842
                                                2682
                                                                 2871
                                                                                                   2811
                                                                                                                   2562
                                                                                                                                                                      2691
                                                                                                                                                                                                        2631
                                                                                                                                                                                                                                           2571
                                                                                                                                                                                                                                                                            2511
                                                                                                                                                                                                                                                                                                                                                                                                                 2271
                                                                                                                                                                                                                                                                                                                                                                                                                                                    2211
```

RESULT 2
AAS74358
ID AAS7
XX
AC AAS7
XX
AC AAS7
XX
AT 13-F
XX

standard;

cDNA;

3392 BP

AAS74358 sta AAS74358; 13-FEB-2002

(first

entry)

```
Qy
                                                                                                                                                                                                         Qy
                                                                                                                                                                                                                              Qy
                                                                                                                                                                                                                                           Вþ
                                                                                                                                                                                                                                                    Qy
                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                         Qy
                                                                                                                                                                                                                                                                                               Qy
                                                                                                                                                                                                                                                                                                                    Qy
                                                                                                                                                                                                                                                                                                                                  В
         Qy
                     ₽
                             Qy
                                         Db
                                                   Qy
                                                                Db
                                                                        Qγ
                                                                                     Вр
                                                                                              Qy
                                                                                                           В
                                                                                                                    QΥ
                                                                                                                                 д
                                                                                                                                          Qy
                                                                                                                                                     рЬ
                                                                                                                                                              Qy
                                                                                                                                                                           Βb
                                                                                                                                                                                               B
                                                                                                                                                                                                                      DЬ
                                                                                                                                                                                                                                                                                       멂
                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                          ρy
밁
                                                                                                                                                       3472
                                                                                                                                                                                                 3352
                                                                                                                                                                                                            3103
                                                                                                                                                                                                                       3292
                                                                                                                                                                                                                                  3043
                                                                                                                                                                                                                                             3232
                                                                                                                                                                                                                                                                            2923
                                                                                                                                                                                                                                                                                        3112
                                                                                                                                                                                                                                                                                                             3052
                                                                                                                                                                                                                                                                                                                       2803
3889
                                                                 3710
                                                                            3459
                                                                                      3650
                                                                                                 3401
                                                                                                            3590
                                                                                                                                 3530
                                                                                                                                                                3223
                                                                                                                                                                            3412
          3639
                     3829
                                3579
                                           3770
                                                      3519
                                                                                                                      3341
                                                                                                                                                                                                                                                                                                            CTTGC
                          CTTACCAAAAACTCAAGCTTCCAAACAGGGATCCATGGACACCCTCAAAACCCCACGCTGC
                                                                                                                                                                                                      ACCAAGGCTAAGAATGGCCACCTGGCTGTGGTGGCCCCCACGGCTGAATTCTCGGTGATGA
                                                                                                                                                                                                                      AACAAGCAGAAGGGAGATGTGGTGCTGCAGAGTGATCATGTGATGGAGACACTAACCAAG
                                                                                                                                                                                                                                                                                       GTAAAATACGACCGTAAGGGTTACAAGCCTCGCCCCGGGCAGCTGCTGCTCACGCCCAGT
          CATCC
                                                                                                                                                       GTTACCAAAGACTCGAACTTCCAGACAGGGACCCAGGGACACCCCGAAGCCCAC - - CTGC
                                                                                                                                                                           AGGCGCCCACTGGACCCTCCCAACGCCCAATGCTTTGCTTTTCTCCTCCTCCCCTTCCCA
                                                                                                                                                                                 GGGCTGGGCTCTGGTGCCCTCTTCCCTGGCCAGGACACCTCTCCTCCTGATTCCCTTGGC
                                                                                                                                                                                                 ACCAAGGCCAAGAACGGGCACCTGGCTGTGGTCGCCCCACGGCTGAATTCTCGGTGATAA
          3643
3893
                                                                                                                      3400
                                                                                                                                           3340
                                                                                                                                                     3529
                                                                                                                                                                3282
                                                                                                                                                                           3471
                                                                                                                                                                                                3411
                                                                                                                                                                                                           3162
                                                                                                                                                                                                                       3351
                                                                                                                                                                                                                                 3102
                                                                                                                                                                                                                                            3291
                                                                                                                                                                                                                                                      3042
                                                                                                                                                                                                                                                                  3231
                                                                                                                                                                                                                                                                            2982
                                                                                                                                                                                                                                                                                       3171
                                                                                                                                                                                                                                                                                                  2922
                                                                                                                                                                                                                                                                                                            3111
                                                                                                                                                                                                                                                                                                                       2862
                                3638
                                           3828
                                                     3578
                                                                3769
                                                                           3518
                                                                                      3709
                                                                                                            3649
                                                                                                                                 3589
                     3888
```

```
The invention relates to isolated polynucleotide (I) and CC polymerase chain reaction (PCR) primers, oligomers, and for chromosome CC and gene mapping, and in recombinant production of (II), The CC for identifying expressed genes. (I) is useful in gene therapy techniques (II), The CC (III), The CC (IIII), The CC (IIIII), The CC (IIII), The CC (IIII), The CC (I
                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local
                                                                                                                                                                                                                                                                                                Best Local Similarity Matches 2906; Conserv
                                      214
                                                                    222
                                                                                                      154
                                                                                                                                      162
                                                                                                                                                                                                      102
                                                                                                                                                                                             94
TCTCTCTCAATCCCTACCGGACCTGCAGATCTACAGCCGGCAACATATGGAGCGTTACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Claim 1; SEQ ID No 10162; 103pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        New isolated polynucleotide and encoded polypeptides, useful in diagnostics, forensics, gene mapping, identification of mutations blodiversity.
                                                                                  AGAACCTCCGGCGGTCCCGGGAGAACCTCATTTATACCTACATCGGTCCTGTCCTAG
                  TCTCTGTGAATGCGTAGCGGAGACGTACAGATGTAGAGCGGGGAGCATATGGAACGGTACC 281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 31-MAR-2000;
23-AUG-2000;
                                                              AGAACCTACGGCGGCGATTTCGGGAGAATCTCATCTACACCTACATTGGCCCCGTCCTGG
                                                                                                                                  GGGTGGGGGTGCAGGATTTCGTGCTGCTGGAGAACTTCACCAGGGAGGCCGCCTTCATCG
                                                                                                                                                   GGGTAGGGGTGCAGGACTTTGTCCTGCTGGAGAATTTCACCAGTGAGGCTGCCTTCATTG 161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (HYSE-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        30-MAR-2001; 2001WO-US08631.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  11-OCT-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WO200175067-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DNA encoding novel human diagnostic protein #10162.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2001-639362/73.
DB; ABG10171.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RT, Liu C,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              HYSEQ INC.
                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2000US-0540217
2000US-0649167
                                                                                                                                                                                                                                                                                                                                         775 A; 993 C; 999 G; 625 T; 0 other;
                                                                                                                                                                                                                                                                                                  69.6%; Score 2549;
86.5%; Pred. No. 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  e mapping; gene mapping; gene therapy; forensic;
medical imaging; diagnostic; genetic disorder;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Tang
                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ΥT
                                                                                                                                                                                                                                                                            Mismatches 440;
                                                                                                                                                                                                                                                                                                           DB 23;
                                                                                                                                                                                                                                                                                                      Length 3392;
                                                                                                                                  153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SS
                                                                                                                                                                                                                                                                   8
                                 δÃ
                                                                    Вþ
                                                                                                 Qy
                                                                                                                                      Ъ
                                                                                                                                                                     Qγ
                                                                                                                                                                                                        Ф
                                                                                                                                                                                                                                    Qγ
                                                                                                                                                                                                                                                                      Ър
                                                                                                                                                                                                                                                                                                      Qγ
                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                    ρy
                                                                                                                                                                                                                                                                                                                                                                                                     Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                   Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ρy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ДЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DЪ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δÃ
```

Ş 밁 Ş ₽ Ş Ъ

Ş

```
DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Qy
                       1294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Qy
                                                                                 1242
                                                                                                                     1114 TGTACAGCCGCACTTTTACCTGGCTCGTCGGGAAAATCAACAGGTCGCTGGCCTCCAAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ър
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ДЬ
                                                                                                                                                         Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ф
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               γ
                                                                                                                                                                                                                       994
                                                                                                                                                                                                                                                                               942
                                                                                                                                                                                                                                                                                                  874
                                                                                                                                                                                                                                                                                                                   814 AGGTCGTCAGGAAGGCTCTGACAGTCATTGATTTCACCGAGGATGAAGTGGAGGACCTGC
754
                                       762
                                                                                                                                                                                                                                                                                                                                                                                                                     694
                                                                                                                                                                                                                                                                                                                                                                                                                                       702
                                                                            642 CCCGGGTGGTGCACCAAAATCACGGAGGGGAACGTCCACGTCTTTTACCAGCTACTGG
                                                                                                                               TGTACAGCCGGACATTCACCTGGCTGGTCAGAAAGATCAATAGGTCACTGGCCTCTAAGG 1181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                574
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                514 GAAATGCCAAGACCCTCCGGAACGATAACTCCAGCAGGTTCGGGAAGTACATGGATGTC
                                                                                                                                                                                                AAGGCTCGACGCTGCGAGAAGCCCTGACACACAGGAAGATCATCGCCAAGGGGGGAAGAGC
                                                                                                                                                                                                           AAGGTACAACACTTAGGGAAGGCCTGACCCACAGGAAGATCATCGCCAAGGGGGAAGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            454
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       402 GCAAGAGAGAGACCAAGAGACTGCTCCAGTTCTATGGAGAGACCTGCCGAGGCCCTG
                                                                                                                                                                                                                                     GCAATGCCCAGGTCACCACCAGGAACCAGCTCAAGTATCTGACCAGGCTCCTCAGCGTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               462
                                                                                                                                                                                                                                                                             TAAGCATCGTGGCCAGCGTCCTTCATTTGGGCCAACATCCACTTTGCTGCCCAACGAGGACA
                                                                                                                                                                                                                                                                                      | TCAGCATCGTGGCCAGCGTCCTACATCTGGGCAACATCCACTTTGCTGCTGACGAGGACA 941
                                                                                                                                                                                                                                                  GCAATGCCCAGGTTACTACTGAGAACCAGCTCAAATATCTGACCAGGCTCCTTGGTGTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           342 GGCACTTCGTACTGAGCGTCGGGACCAGGCAGTGATTGTTCTGGAGAGAGTGGGGCAG 401
                                                                                                                                                                                                                                                                                                                              AGGGGGGGAGAGAGACTCTCCGTCGGCTGGGCTTGGAACGGAACCCCAGĀGCTACT
                                                                                                                                                                                                                                                                                                                                                                                                                                    CACGAGTGGTGCACCAGAATCATGGGGAGCGGGAACTTCCACATCTTCTACCAGCTGGTGG
                                                                                                                                                                                                                                                                                                                                                                                                AGGGGGCGAGGAAGAAACTCTTCGCAGGCTGGGCTTGGAACGGAACCCCCAGAGCTACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGTTTGACTTCAAGGGTGCCCCCCGTGGGTGGCCACATCCTCAGTTACCTCCTGGAAAAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGTTTGACTTCAAGGGTGCCCCCGTGGGAGGCCACATTCTCAGTTACCTCCTGGAAAAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGAATGGCAAGACTCTCCGCAACGATAACTCCAGCCGGTTTGGAAAGTACATGGATGTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAGGCGGAGGTGCCGTGCGGGGACCGGCTGCTACAGAGCAACCCGGTGCTGGAGGCCTTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AACGGGGTGGGGCAGTGCGAGACCGCCTGTTGCAGAGCAACCCCGTGTTAGAGGCCTTTTG 521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GCAAGACCGAAGCCAACAAGAAGCTGCTGCAGTTCTATGCAGAGACCTGCCCAGCCCCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GAGCACTGCGCACGGAGCGTCGGGACCAGGCTGTGATGATCTCTGGGGAGAGCGGGGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GTGGTGTGAGTTTCTATGAAGTACCACCTCATTTGTTTGCAGTGGCTGACACTGTATACC
                                                                                                                                                                                                                                        993
                                                                                                                                                                                                                                                          1001
                                                                                                                                                                                                                                                                             933
                                                                                                                                                                                                                                                                                                                                      881
                                                                                                                                                                                                                                                                                                                                                                                                                                      693
                                                                                                                                                                                                                                                                                                                                                                                                                                                         701
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               641
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            633
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 573
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    581
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       513
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    393
```

οy

B οy 망 Ş ð

g δÃ

В

G

```
1362
                                                                                                               2194
                                                                                                                                                                                                                                                                                1894
                                                                                                                                                                                                                                                                                                1901
                                                                                                                                                                                                                                                                                                                1834
                                                                                                                                                                                                                                                                                                                               1841
                                                                                                                                                                                                                                                                                                                                                1774
                                                                                                                                                                                                                                                                                                                                                                                1714
                                                                                                                                                                                                                                                                                                                                                                                                1722
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1474
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1422
                                                                2321
                                                                                2254
                                                                                               2261
                                                                                                                               2201
                                                                                                                                                2134
                                                                                                                                                               2141
                                                                                                                                                                                                2081
                                                                                                                                                                                                               2014
                                                                                                                                                                                                                                                1954
                                                                                                                                                                                                                                                               1961
                                                                                                                                                                                                                                                                                                                                                                                                                                                1594
                                                                                                                                                                                                                                                                                                                                                                                                                                                               1602
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1534
2441
                               2381
                                                                                                                                                                                                                                                                                                                                                                                                                               1662
                                                                                                                                                                                                                                                                                                                                                                                                                1654
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGGTGAAGTACCTGGGACTGATGGAGAATCTGCGCGTGCGCAGAGCTGGCTTTTGCCTATC
                                                                                                                                                                                                                                                                                                                                                                                                               AGACCATCCGTCGACTCATCCGTGGCTTCATTTTGCGCCATTCACCCCGGTGCCCTGAGA
                                                                                       GGAGGGGCTTTCATTGGCGACAGAAATTTCTCCCGGGTGAAGCGATCAGCCATCTGTATCC
                                                                                                                                                       CCACAGAGGACTCCCTGGAAGTCCGGCGGCAGAGTCTAGCCCACCAAGATCCAGGCGGCCT
                                                                                                                                                                                                                                                                                                                       GCATCAAGCCAAACGACCCAAGCAGCCGGGTCGCTTTGATGAGGTGCTCATCCGACATC
                                                                                                                                                                                                                                                                                                                                                       GCTTTGACAAGAGTGAGCTCAGTGACAAGAAGCGGCCAG-GACGGTGGCCACCCAGTTCA
AGTCGTGGTGGCGTGGAACACTGGGCCGGAGGAAGGCAGCCAAGAGGAAGTGGGCGGCAC
                                                                                                                GGAGGGGCTTTCACTGGCGGCAGAAATTCCTCCGGGTGAAGAGATCAGCCATCTGCATCC
                                                                                                                                                CCACAGAGGATGCCCTGGAGGTCCGGCGGCAGAGCCTGGCCACAAAGATCCAAGCTGCCT
                                                                                                                                                                                                                                                                                                                GCATCAAACCCAATGATGCCAAACAGCCCGGCCGCTTTGACGAGGTGCTGATCCGCCACC
                                                                                                                                                                                                                                                                                                                                                AGATGAGCCTCCTGCAGCTGGAGATCCTGCAGTCTAAGGAGCCCGCCTACGTCCGCT
                                                                                                                                                                                                                                                                                                                                                                               GCTTCGACCGGAGCGAGCTCAGTGACAAGAAGCGGCCAGAGACGGTCGCCACCCCAGTTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1593
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1533
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1481
                                                2373
                                                                                                                                                                                                                                                                                                                              1900
                                                                                                                                                                                                                                                                                                                                                               1840
                                                                                                                                                                                                                                                                                                                                                                               1773
                                                                                                                                                                                                                                                                                                                                                                                                                1713
                                                                                                                                                                                                                                                                                                                                                                                                                                                1653
                                                                                                                                                                                                                                                                                                                                                                                                                                                               1661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1413
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1421
2499
                              2440
                                                               2380
                                                                              2313
                                                                                               2320
                                                                                                               2253
                                                                                                                               2260
                                                                                                                                               2193
                                                                                                                                                              2200
                                                                                                                                                                              2133
                                                                                                                                                                                               2140
                                                                                                                                                                                                              2073
                                                                                                                                                                                                                              2080
                                                                                                                                                                                                                                                2013
                                                                                                                                                                                                                                                               2020
                                                                                                                                                                                                                                                                               1953
                                                                                                                                                                                                                                                                                               1960
                                                                                                                                                                                                                                                                                                                1893
                                                                                                                                                                                                                                                                                                                                               1833
```

Ş В õ В δÃ В Qy В

В

```
Qy
                                                                                                                                                                                                                                                                                                                                                                                                            Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                               Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                  Ъ
                                                  δÃ
                                                                   Вb
                                                                                   Qy
                                                                                                       망
                                                                                                                      Q
                                                                                                                                          В
                                                                                                                                                          δÃ
                                                                                                                                                                                            Ş
                                                                                                                                                                                                                DЬ
                                                                                                                                                                                                                               Ωy
                                                                                                                                                                                                                                                  DЬ
                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                    Qγ
                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                             망
                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Вþ
g
               δõ
                                                                                                                                                                             B
3332
                                                                     3214
                                                                                                        3154
                                                                                                                        3153
                                                                                                                                           3094
                                                                                                                                                                             3034
                                                                                                                                                                                              3033
                                                                                                                                                                                                                                                   2914
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2500
                                                                                                                                                                                                                                                                                                                                                         CCTGAGTGGAAGCAGCAGCTGCAGCAAAAGGCGGTGGCTAGTGAAATTTTCAAGGGCAAG
         GAGCTACCCCATGAGTGGGCCAGGCCGGGCCACACCCAATAGAAAAGCAGAGGCCTGAGC
                                                                   GCGTGAAGACAACAAGCAGAAGGGAGATGTGGTGCTGCAGAGTGATCATGTGATCGAGAC
                                                                                                                                                                                                                                                                                   GAACTGCTACGGGAACTGTGCATGAAGAACATGGTGTGGAAGTACTGCCGGAGCATCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GAGCTACCCCAGGAGTGGGCCAGGGCCGGGCCACAGCAATAGGAAAGCCAGGGCCAGAGC
                                  TCGGTGATGAAGGCTGCGGTGGACCGCTCCTGACTCCTGATGCTTCCCTTAGTCCCCTCC
                                                                                                                                          CATAACGTTTGCAGGGGGTCCAGGCAGGGACGGCATCATTGACTTCACATCGGGCTCAGA
                                                                                                                                                                                                                         ACTAACCAAGACGGCCTCAGTGCTGACCGCGTGAACAATATCAACATCAACCAGGGCAG
                                                                                                                                                                                                                                                   GCGTGCGGACAATAAGCAAAAGGGAGATGTGGTGCTGCAGAGTGACCACGTGATTGAGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GAGCTTCTGCGGGAGTTGTGCATAAAGAACATGGTGTGGAAATACTGCCGGAGTATCAGC
                                                                                                        TCGGTGATAAAGGCGCCCACTGGACCATCCCAACGCCCAAAGCTTTGCTTTTCTCCTCCT
                                                                                                                                                            GCTTCTCATCACCAAGGCTAAGAATGGCCACCTGGCTGTGGTGGCCCCACGGCTGAATTC
                                                                                                                                                                             CATCACGTTTGCAGGGGGCCCCGGCAGGGATGGCACCATTGACTTCACACCCGGCTCGGA
                                                                                                                                                                                                                 GCTGACCAAGACAGCCCTCAGTGCCAACCGCGTGAACAGCATCAACATCAACCAGGGCAG
3390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2493
                                                                     3271
                                                                                      3272
                                                                                                        3213
                                                                                                                        3212
                                                                                                                                           3153
                                                                                                                                                                              3093
                                                                                                                                                                                              3092
                                                                                                                                                                                                                 3033
                                                                                                                                                                                                                                 3032
                                                                                                                                                                                                                                                   2973
                                                                                                                                                                                                                                                                    2972
                                                                                                                                                                                                                                                                                     2913
                                                                                                                                                                                                                                                                                                      2912
                                                                                                                                                                                                                                                                                                                                         2853
                                                                                                                                                                                                                                                                                                                                                           2793
                                                                                                                                                                                                                                                                                                                                                                            2794
                                                                                                                                                                                                                                                                                                                                                                                             2733
                                                                                                                                                                                                                                                                                                                                                                                                               2739
                                                                                                                                                                                                                                                                                                                                                                                                                                 2673
                                                                                                                                                                                                                                                                                                                                                                                                                                                 2679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2613
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2619
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2553
```

δ Ъ δ

В Qy Db

S д Q Qγ В δõ 밁 δÃ 밁 δ В δ

В

AAS74359 standard; 3771 ВP

13-FEB-2002 (first entry)

RESULT 3
AAS74359
ID AAS7
XX
AC AAS7
XX
DT 13-F
XX
DE DNA encoding novel human diagnostic protein #10163.

```
ď
                                                                                                                                                               δ
                                                                                                                                                                                                                                                                                         The invention relates to isolated polynucleotide (I) and CC polymerase chain reaction (PCR) primers, oligomers, and for chromosome CC and gene mapping, and in recombinant production of (II). The primers, oligomers, and for chromosome CC indentifying expressed genes. (I) is useful in gene therapy techniques CC in J. (II) is useful in gene therapy techniques CC in cestore normal activity of (II) or to treat disease states involving CC quantitating a polypeptide in tissue, as motions against it, detecting or CC imaging of sites expressing (II). (II) and its binding partners are useful in medical CC disorders involving aberrant protein expression or biological activity. The polypeptide and polynucleotide sequences have applications in CC and to produce other types of data and products dependent on DNA and CC specification, but was obtained in electronic format directly from WIPO CC intended to the sequences of the invention.
                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                Best Local Similarity 81.7
Matches 1847, Conservative
                                                                                                                                                                                                                                                        Query Match
Best Local
771 TGAAGGGCCAGTGTGCCAAGGTCTCCTCCATCAACGACAAGAGTGACTGGAAGGTTATGA 830
                                                   362 AGGAGGAGACTCTTCGGAGGCTGGGCTTGGAACGGGAACCCCCAGAGCTACCTGTACCTGG 421
                                                                 711 AGGAGGACACTCTCCGTCGGCTGGGCTTGGAACGGAACCCCCAGAGCTACTTGTACCTGG 770
                                                                                                   591 TCAAGGGTGCCCCCGTGGGAGGCCACATTCTCAGTTACCTCCTGGAAAAGTCCCGGGTGG 650
                                                                                                                                                                                                                                                                 Sequence 3771 BP; 748 A; 1217 C; 1092 G; 714 T; 0 other;
                                                                                                                                                      242 TGAAGGGTGCCCCCGTGGGTGGCCACATCCTCAGTTACCTCCTGGAAAAGTCACGAGTGG 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     New isolated polynucleotide and encoded polypeptides, useful in diagnostics, forensics, gene mapping, identification of mutations blodiversity.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Claim 1; SEQ ID No 10163; 103pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 2001-639362/73.
P-PSDB; ABG10172.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Drmanac RT, Liu C,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (HYSE-) HYSEQ INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        31-MAR-2000; 2000US-0540217.
23-AUG-2000; 2000US-0649167.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            30-MAR-2001; 2001WO-US08631
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human; chromosome mapping; gene mapping; gene therapy; forensic; food supplement; medical imaging; diagnostic; genetic disorder; ss.
                                                                                                                                                                                                                     40.8%; Score 1492; DI
81.7%; Pred. No. 0;
ative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Tang YT;
                                                                                                                                                                                                                                             DB 23;
                                                                                                                                                                                                                   320;
                                                                                                                                                                                                                                      Length 3771;
```

밁 Ş В δÃ

B δÃ Ъ γQ В Qy В γQ В ρ ДЪ ρ B ρ

```
RESULT 4
AA160933
ID AA16
XX
AC AA16
XX
DT 22-C
XX
DE Huma
                                                                                                                                          Вþ
                                                                                                                                                           Ş
                                                                                                                                                                                               δõ
                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                             망
                                                                                                                                                                                                                                                                                                            δõ
                                                                                                                                                                                                                                                                                                                                  д
                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                            Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                  δÃ
                                                                                                                                                                               В
                                                                                                                                                                                                                                    δõ
                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              망
                                                                                                      밁
                                                                                                                                                                                                                                                         2147
                                                                                                                                                                                                                                                                                                                                  2027
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1736
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1556
                                                                                                                                                                                                                     2207
                                                                                                                                                                                                                                       2613
                                                                                                                                                                                                                                                                                              2087
                                                                                                                                                                                                                                                                                                                 2493
                                                                                                                                                                                                                                                                                                                                                                        1967
                                                                                                                                                                                                                                                                                                                                                                                         2373
                                                                                                                                                                                                                                                                                                                                                                                                            1907
                                                                                                                                                                                                                                                                                                                                                                                                                               2313
                                                                                                                                                                                                                                                                                                                                                                                                                                                 1847
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2073
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2013
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1616
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1953
Human
                                                                                                                                                                                                  2673
                                                       AAI60933 standard;
                   22-OCT-2001
                                                                                                                                                                                       CACAGAGGAGATCAGCCCCAGAGTGCTTCAATCCTTGGGCTCTGAACCCATCCAGTATGC
                                                                                                                                                                                                                  GGCCTCAGAACTGCTACGGGAACTGTGCATGAAGAACATGGTGTGGAAGTACTGCCGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                               CTGTATCCAGTCATGGTGGCGTGGCACACTGGGCCGGAGGAAGGCAGCCAAGAGGAAGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CTACAAGCCAGAAGAGTACAAAATGGGCAGGACTAAGATCTTCATCCGATTCCCCAAGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATGCCCCATGTGGGCAGGACGCCCCAGGATGGTGTGGCCGTGTTGGTCAGACACCTCGG
                                                                                                              CACGCCCAGTGCTGTGGTCATTGTGGAGGATGCTAAAAGTC
                                                                                                                                                    CGTGCCCGTGGTAAAAATACGACCGTAAGGGTTACAAGCCTCGCCCCCGGCAGCTGCTGCT
                                                                                                                                                                                                                                                                                                                                           CCCTGAGAATGCCTTCTTCGTTGGACCACGTGCGCGCCTCATTTTTGCTTAACCTGAGGCG
                                                                                                                                                                                                                                                                                                                                                                                                                     GGCAGCCCAGACCATCCGTCGACTCATCCGTGGCTTTTTGCGCCCATTCACCCCGGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TGCCTATCGTCGCAAATATGAGGCTTTCCTGCAGAGGTACAAGTCACTGTGCCCAGAGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TCCCCCTACCCCAGGCCGCTTTGACGAGGTGCTGATCCGCCACCACGTGAAAGCCGGCTT
                                                                                                    CACGCCCAACGCCGTCGTCATCGTGGAGGACGTCAAAGTC
                                                                                                                                         GGTGCCTGTTGTGAAATACGACCGCAAGGGCTACAAGCCTCGCTCCCGGCAGCTGCTGGT
                                                                                                                                                                               TACAGATGAGATCAGCCCCCGAGTGCTGCAGGCCTTTGGGCTCTGAGCCCATTCAGTATGC
                                                                                                                                                                                                                                                                                                                                  GCAGCTGCCCCAGAATGTCCTGGACACCTCGTGGCCCACGCCCCACCTGCCCTGCGTGA
                                                                                                                                                                                                                                                                                                                                                                      CCCCGAGAACGCCTTCTTCCTGGACCATGTGCGCACCTCTTTTTTGCTAAACCTGAGGCG
                                                                                                                                                                                                                                                                                                                                                                                                           GGCGGCCTGGAGGGGCTTTCATTGGCGACAGAAATTTCTCCGGGTGAAGCGATCAGCCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TGCCTATCGCCGCAAATACGAAGCTTTCCTGCAAAGGTACAAGTCACTGTGCCCAGAGAC
polynucleotide
                  (first entry)
                                                       cDNA;
SEQ
IJ
ö
 4922
                                                                                                    2426
                                                                                                                       2832
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1966
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1846
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1615
                                                                                                                                          2386
                                                                                                                                                             2792
                                                                                                                                                                                                                    2266
                                                                                                                                                                                                                                                         2206
                                                                                                                                                                                                                                                                          2612
                                                                                                                                                                                                                                                                                            2146
                                                                                                                                                                                                                                                                                                              2552
                                                                                                                                                                                                                                                                                                                                 2086
                                                                                                                                                                                                                                                                                                                                                   2492
                                                                                                                                                                                                                                                                                                                                                                                        2432
                                                                                                                                                                                                                                                                                                                                                                                                                                               1906
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1735
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2072
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1675
                                                                                                                                                                             2326
                                                                                                                                                                                                2732
                                                                                                                                                                                                                                     2672
                                                                                                                                                                                                                                                                                                                                                                      2026
                                                                                                                                                                                                                                                                                                                                                                                                                             2372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1840
```

```
Дb
                                                                  2
                                                                                         В
                                                                                                                                                                                       B
                                                                                                               Qy
                                                                                                                                                   Query Match
Best Local Similarity
                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             03-AUG-2000;
14-SEP-2000;
19-OCT-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              21-JAN-2000;
25-APR-2000;
09-JUL-2000;
19-JUL-2000;
                                                                                                                                                                                                                                            The invention relates to human nucleic acids (AAI57798-AAI61369) and the encoded polypeptides (AAM38642-AAM42213) with nootropic, immunosuppressant and cytostatic activity. The polynucleotides are useful in gene therapy. A composition containing a polypeptide or polynucleotide of the invention may be used to treat diseases of the peripheral nervous system, such as peripheral nervous injuries, peripheral neuropathy and localised neuropathies and central nervous system disease, such as alzheimer's, Parkinson's disease, Huntington's disease, amyotrophic lateral sclerosis, and Shy-Drager Syndrome. Other uses include the utilisation of the activities such as: Immune system suppression, Activiny, himbin activity, chemotactic/chemokinetic activity, hamostatic and thrombolytic activity, cancer diagnosis and therapy, drug screening, assays for receptor activity, arthritis and inflammation, leukaemias and
                                                                                                                                                                                                                          C.N.S
Note:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Zhao
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Tang
Wang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              peripheral nervous system; neuropathy; central nervous system; CNS; Alzheimer's; Parkinson's disease; Huntington's disease; haemostatic; amyotrophic lateral sclerosis; Shy-Drager Syndrome; chemotactic; chemokinetic; thrombolytic; drug screening; arthritis; inflammation;
                                                                                                                                                                                      Sequence 1727
                                                                                                                                                                                                             specification
                                                                                                                                                                                                                                                                                                                                                                                                                Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                        such
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Novel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          P-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (HYSE-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                29-NOV-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         26-DEC-2000;
                      164
                                             352
                                                                   104
                                                                                                                 44
                                                                                        J,
QA,
                                         1267;
           AACCTCCGGCGGTTCCGGGAGAACCTCATTTATACCTACATCGGTCCTAGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2001-442253/47.
DB; AAM41777.
AACCTGCGGCGATTTCGGGAGAATCTCATCTACACCTACATTGGCCCCGTCCTGGTC
                                                                                                                                                                                                                      disorders.
The sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                     nucleic acids and polypeptides, useful as central nervous system injuries -
                                                                                                                                                                                                                                                                                                                                                                                                               1; SEQ ID NO 4922;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             nootropic; immunosuppressant; cytostatic; gene therapy;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          , Liu C,
Wang Z,
, Zhou P,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HYSEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2000US-0488725.

2000US-0552317.

2000US-0598042.

2000US-0620312.

2000US-0653450.

2000US-0652191.

2000US-0693036.

2000US-0727344.
                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2000WO-US34263
                                                                                                                                                                                       ВP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Asundi V, Ch
Wehrman T, X
, Goodrich R,
                                                                                                                                                                                       364 A;
                                                                                                                                                                                                                         data for this
                                                                                                                                                   31.3%;
                                                                                                                                                                                       500 C;
                                                                                                                                                                                                                                                                                                                                                                                                                10078pp; English
                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Chen R, Ma
Xu C, Xue
                                                                                                                                      Pred. No. 1.86
0; Mismatches
                                                                                                                                                               Score 1144.8;
                                                                                                                                                                                       543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Drmanac
                                                                                                                                                                                                                         patent did not form
                                                                                                                                                                                       <u>و</u>;
                                                                                                                                                                                       320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           a Y,
e AJ,
RT;
                                                                                                                                                    .8e-3
                                                                                                                                                                                       T; 0
                                                                                                                                        167; Indels
                                                                                                                                                               DB 22; Length 1727;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Qian :
Yang
                                                                                                                                                                                                                                                                                                                                                                                                                                                  for treating
                                                                                                                                                                                       other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g xB,
                                                                                                                                                                                                                         part
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ren F,
Zhang
                                                                                                                                                                                                                         of
                                                                                                                                        2;
                                                                                                                                                                                                                        the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Wang
                                                                                                                                        Gaps
                                                                                                                                                                                                                         printed
471
                                           411
                                                                  163
                                                                                           351
                                                                                                                 103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ď,
                                                                                                                                        2;
```

δõ

```
ф
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        д
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             д
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                             1372
                                                                                                                                                   1064 CTGAGGCCACTGAACCTTGAACAGGCGGCATATGCAAGGGATGCGCTTGCCAAGGCTGTG 1123
                                                                                                                                                                                             1004 GGTAGAAGACTTAGGGAAGGCCCTGACCCACAGGAAGATCATCGCCAAGGGGGAAGAGCTC 1063
                                                                                                                                                                                                                                                   1192
                                                                                                                                                                                                                                                                                                                                          1072
                                                                                                                                                                                                                                                                                                                                                                                       1012
                                                                                                                                                                                                                                                                                                                                                                                                                                    952
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 892
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       644
GAAGTGTTTCAGCATAACAGCTTCGAGCAGTTCTGCATCAACTACTGCAATGAGAAGCTG
                                                          GCTGAGAGGCCCAGCTGGCGAAGCACCACGGTTCTTGGGCTCCTGGACATTTACGGCTTT
                                                                                                      TACAGCCGGACATTCACCTGGCTGGTCAGAAAGATCAATAGGTCACTGGCCTCTAAGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    652
                                              GTGGAGAGCCCAGCTGGCGGAGCACCACGGTTCTCGGGCTCCTGGATATTTATGGCTTT
                                                                                                                                CTGAGCCCGCTGAACCTGGAGCAGGCCGCGTACGCACGAGACGCCCTCGCCAAGGCTGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               592
                                                                                         TACAGCGCACTTTTTACCTGGCTCGTCGGGAAGATCAACAGGTCGCTGGCCTCCAAGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         472
                                                                                                                                                                                    GGCTCGACGCTGCGAGAAGCCCTGACACACAGGAAGATCATCGCCAAGGGGGGAGGAGCTC
                                                                                                                                                                                                                               AATGCCCAGGTCAGCACCGAGAACCAGCTCAAGTATCTGACCAGGCTCCTCAGCGTGGAA
                                                                                                                                                                                                                                           AATGCCCAGGTTACTACTGAGAACCAGCTCAAATATCTGACCAGGCTCCTTGGTGTGGAA 1003
                                                                                                                                                                                                                                                                         GTTATGAGGAAGGCGCTGTCCGTCATTGACTTCACTGAGGATGAAGTGGAGGACTTGCTC
                                                                                                                                                                                                                                                                                                                                                                  TACCTGGTGAAGGGCCAGTGTGCCAAGGTCTCCTCCATCAACGACAAGAGTGACTGGAAG 823
                                                                                                                                                                                                                                                                                                                      GTCGTCAGGAAGGCTCTGACAGTCATTGATTTCACCGAGGATGAAGTGGAGGACCTGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CGGGTGGTGCACCAAAATCACGGAAGAGGGGAACTTCCACGTCTTTTACCAGCTACTGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                 GGGGGCGAGGAAGAAACTCTTCGCAGGCTGGGCTTGGAACGGAACCCCCCAGAGCTACCTG
                                                                                                                                                                                                                                                                                                                                                                                                                              GGGGGGAGGAGAGAGACTCTCCGTCGGCTGGGCTTGGAACGGAACCCCCAGAGCTACTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                              CGAGTGGTGCACCAGAATCATGGGGAGCGGGAACTTCCACATCTTCTACCAGCTGCTGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AATGCCAAGACTCTCCGCAACGATAACTCCAGCCGGTTTGGAAAGTACATGGATGTGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AATGCCAAGACCCTCCGGAACGATAACTCCAGCAGGTTCGGGAAGTACATGGATGTGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAGACAGAGGCCACCAAGAGAGTGCTCCAGTTCTATGCAGAGACCTGCCCAGCCCCTGAA 463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GCACTTCGTACTGAGCGTCGGGACCAGGCAGTGATGATTTCTGGAGAGAGTGGGGGCAGGC 403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAGACCGACGCCAAGAGAGGCTGCTGCAGCTCTATGCAGAGAGCCTGCCCAGGCCCCCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GCACTGCGCACGGAGCGTCGGGACCAGGCTGTGATGATCTCTGTGGAGAGCGGGGGCAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGTGTCAGTTTCTATGAAGTACCACCTCATTTGTTTGCAGTGGCTGACACTGTATACCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCTGTCAATCCCTACCGAGACCTACAGATCTACAGCCGGCAGCATATGGAACGCTACCGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1431
                                                                                                                 1183
                                                                                                                                                                                      1311
                                                                                                                                                                                                                                                                                                                                                                                                                                         763
                                                                                                                                                                                                                                                                                                                                                                                                                   1011
                                                                                                                                                                                                                                                                                                                                                                                                                                                                951
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      703
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            891
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        831
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  711
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              651
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        531
```

밁

Ş Ъ

106 AGGGGTGCAGGACTTTGTCCTGCTGGAGAATTTCACCAGTGAGGCTGCCTTCATTGAGAA

CATGGCCAGTTTTAATTCCCAACTGAAAATGGAGACGGGCCTGCACGAGCGTGATCGTGC 175

밁 Ş В Š В δ Ъ Ş 망 ý В Ş DЬ Ş В Ş В Ş g γ

```
RESULT 5
ABLJ 4551
ID 49551
XX ABLJ
XX ABLJ
XX DTO 26-M
DT 26-M
DT 26-M
DT 26-M
DT 26-M
DT 27-
XX DTO 27-
XX PP 23-
XX PR 11-
PR 23-
PR 23-
PR 23-
PR 11-
PR 23-
XX PR 11-
XX PR 11
                                                    γ
                                                                                                                   Query Match
Best Local Similarity
                                                                                                    Matches 1708;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Д
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Qy
                                                                                                                                                                                                     The invention relates to an isolated nucleic acid detection reagent capable of detecting 1000 or more genes from Drosophila. The invention is useful in developmental biology and in elucidating cell signalling and insecticides, theractions in higher eukaryotes for the development of discloses genomic DNA sequences (ABL16176-ABL30511), expressed DNA sequences (ABL01840-ABL16175) and the encoded proteins (ABB57037-ABB72072).

The sequence data for this patent did not form part of the printed at ftp.wipo.int/pub/published_pct_sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Claim 1; SEQ ID NO 10126; 21pp + Sequence Listing; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   New isolated nucleic acid genes from Drosophila and interactions -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 2001-656860/75.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Venter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         23-MAR-2000; 2000US-191637P.
11-JUL-2000; 2000US-0614150.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (PEKE ) PE CORP NY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                23-MAR-2001; 2001WO-US09231.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Drosophila melanogaster
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Drosophila; developmental biology; cell signalling; insecticide; pharmaceutical; gene; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          27-SEP-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Drosophila melanogaster genomic polynucleotide SEQ ID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 26-MAR-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ABL19551 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1612
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1304 CAGCAGCTCTTCATCGAGCTGACTCTCAAGTCGGAGCAGGAGGAATACGAGGCTGAGGGC
CCTGGGCAGTGACGGGGTTCGAGTGACCATGGAGAGCGCCTTGACTGCCCGAGACCGGGT 105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3406 BP; 885 A; 893 C; 924 G; 704 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATCGCGTGGGAACCTGTCCAGTACTTCAACAACAAGATCATCTGTGACCTGGTAGAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CAGCAGCTCTTCATCGAGCTCACGCTCAAGTCGGAGCAGGAGGAGTACGAGGCAGAGGGC
                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Adams M,
                                                                                                              23.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DNA; 3406
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PWD,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         detection reagent for detecting 1000 or more for elucidating cell signalling and cell-cell
                                                                                         0;
                                                                         Score 875.2; DB 23;
Pred. No. 4e-236;
0; Mismatches 1183;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Myers
                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NO 10126.
                                                                       53;
                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1671
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1611
                                                                                                                                                                                                                                                                                                                                                                                                                                  15
```

- -	1245 1281	1186 TGAGAGCCCCAGCTGGCGAAGCACCACGGTTCTTGGGCTCCTGGACATTTACGGCTTTGA	
	1185 1230		
	1125 1170	1066 GAGCCCACTGAACCTTGAACAGGCGGCATATGCAAGGGATGCGCTTGCCAAGGCTGTGTA	
	1065 1110	1006 TACAACACTTAGGGAAGCCCTGACCCACAGGAAGATCATCGCCAAGGGGGAAGAGCTCCT	
	1005 1050	a a	
	945 990	886 CATCGTGGCCAGCGTCCTACATCTGGGCAACATCCACTTTGCTGCTGACGAGGACAGCAA	
	885 933	826 TATGAGGAAGGCGCTGTCCGTCATTGACTTCACTGAGGATGAAGTGGAGGACTTGCTCAG	
	825 873	766 CCTGGTGAAGGGCCAGTGTGCCAAGGTCTCCTCCATCAACGACAAGAGTGACTGGAAAGGT	
	765 813	706 GGGCGAGGAGACTCTCCGTCGGCTGGGCTTGGAACGGAACCCCCAGAGCTACTTGTA	
	705 753	46 GGTGGTGCACCAAAATCACGGAGAGCGGAACTTCCACGTCTTTTACCAGCTACTGGAG 	
	645 693	86 TGACTTCAAGGGTGCCCCCGTGGGAGGCCACATTCTCAGTTACCTCCTGGAAAAGTCCCG 	
	585 633	526 TGCCAAGACTCTCCGCAACGATAACTCCAGCCGGTTTGGAAAGTACATGGATGTGCAGTT 	
	525 573	466 GGGTGGCGCAGTGCGAGACCGCCTGTTGCAGAGCAACCCCCGTGTTAGAGGCCCTTTGGGAA	
	465 513	AGGCCACCAAGAGACTGCTCCAGTTCTATGCAGAGACCTGCCCAGCCCCTGAACG	
	405 453	346 ACTTCGTACTGAGCGTCGGGACCAGGCAGTGATGATTTCTGGAGAGAGTGGGGCAGGCA	
	345 393	286 TGTCAGTTTCTATGAAGTACCACCTCATTTGTTTGCAGTGGCTGACACTGTATACCGGGC	
	285 333	ACCTACAGATCTACAGCCGGCAGCATATGGAACGCTACCGTGG	
	225 273	166 CCTCCGGCGGGGTTCCGGGAGAACCTCATTTATACCTACATCGGTCCTGGTCCTAGTCTC	
	235	176 TGGAGTCCAGGACTTTGTGCTCCTCGAGAACTACCAGAGCGAAGAAGCCTTCATCGGGAA	

 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9
 9

2259 CCAGTCATGGTGGCGTGGCACACTGGGCCGGAGGAGGCAGCCAAGAGGAAGTGGGCAGC 2318	B 5
	}
2199 CTGGAAGGGGCTTTCATTGGCGACAGAAATTTCTCCCGGGTGAAGCGATCAGCCATCTGTAT 2258	Db Qy
2 CGATACGGAGGATGCCTACCAGGAGAAGAAACATGAGATAAGCGGCCATCATCCAGGCCCA 22	Db 4
122 CGAGGAAAAGTACAGGGTGGGCGAGACGAAACTATTCATCCGCTGGCCGAGAACCTTGTT 218	g B
079 GCCAGAAGAGTACAAAATGGGCAGGACTAAGATCTTCATCCGATTCCCCAAGACCTTATT 213	Qy
2019 CATGTGGGCAGGACGCCCCAGGATGGTGGTGGCCGTGTTGGTCAGACACCTCGGCTACAA 2078	Db Db
1002 AACGTATGAGCTCTTCCTGGAGCGCTACAAGTCCCTGAGCAAGTCCACCTGGCCCAATTA 2	Db
AATATGAGG	Qy
1942 CAAGTACCTTGGCCTGATGGAGAATCTGCGTGTGAGGCGAGCTGGTTTCGCCTACCGACG 2001	DЬ
CTGGGACTGATGGAGAATCTGCGCGTGCGCAGAGCTGGCTTTGCCTATC	Qy
1845 CAAGCCAAACGACGCCAAGCAGCCGGGTCGCTTTGATGAGGTGCTCATCCGACATCAGGT 1904	Дb
.822 ATCTCTTAACAACCTCATGGACATTCTGATGTGCAAGGAGCCGAGCTACATTCGCTGCAT 18	Db
785 GAGCCTCCTGCAGCTCGTGGAGATCCTGAGGTCTAAGGAGCCTGCCT	Qy
1762 CCCGGAGAAGGAGCTGCGCAGCCTGAAGCGTCCGGAGACGGCTATCACCCAGTTCCGGGC 1821	Db
AGTGAGCTCAGTGACAAGAAGCGGCCAG-GACGGTGGCCACCCAGTTC	Qy
TOTO CTTCCGARCCARGAGACCCATCTCACCACCCATCACCCCACTCATGCCCCACTGCTT 1/20	DB 45
042 CIATUCCUGUCUACACCIACAG IGICAA IGGAI CUTUCUGACAAGAACAACGACCIGII 1/	2
06 TEATGCTGGAGAGGTGACCTACAGTGTGACTGGGTTTCTGGATAAAAACAATGACCTCCT 16	, Qy
.582 CGAAAAGGCGCCCGCCCACATCAAGAAAATCATGCTGCGCGATGAGTTCCGCTTGGTGCA 164	Db
GAAGACCAGO	Qy
1522 TAAGACCTTCCTTGAGAAGCTCACCCAGAAATTGGCCCAGCACCACCACCACGTTTGCCA 1581	Db
486 CCTGACCTTTCTGGAGAAGTTGGAGGACACTGTCAAGCCCCACCCTCACTTCCTGACGC	Qy
1462 GCACAAGGGCATCATCTCCATACTGGACGAGGAGTGCTTGCGACCAGGAGAGGCCCACGGA 1521	Db
TTCAAGGGCATCATCTCCATCTTGGATGAAGAGTGCCTGCGTCCTGGGGAGGCC	Qy
1402 CGAGTGGATACCTGTGGAGTACTTCGACAACAAGGTGATTTGCAATCTGATCGAGGAGAA 1461	DЪ
GCGTGGGAACCTGTCCAGTACTTCAACAAGATCATCTGTGACCTGGTAGAGGAC	Qγ
342 GCAGCTGTTCATCGAGCTTACCCTTAAGTCGGAGCAGGATGAATACCGCCGGGAGGGCAT 140	Db :
306 GCAGCTCTTCATCGAGCTGACTCTCAAGTCGGAGCAGGAGGAATACGAGGCTGAGGCAT 136	Ov
	DЬ
AGCATAACAGCTTCGAGCAGTTCTGCATCAACTACTGCAATGAGAAGCTGC	Qy

```
RESULT 6
ABL04915
ABL0
XX ABL0
XX ABL0
XX
DT 26-M
DT 26-M
XW Dros
XW Dros
XW Phar
XX Phar
XX Pag
PD 27-S
XX PF 23-M
PR 11-J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            дЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
  23-MAR-2000; 2000US-191637P.
11-JUL-2000; 2000US-0614150.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                  23-MAR-2001; 2001WO-US09231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                       W0200171042-A2
                                                                                                      Drosophila melanogaster
                                                                                                            Drosophila; developmental biology; cell signalling; insecticide; pharmaceutical; gene; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                              Drosophila melanogaster expressed polynucleotide SEQ ID NO 9227.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           д
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                            26-MAR-2002
                                                                                                                                                                                                                               ABL04915 standard; cDNA; 3349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ъ
                                                                                                                                                                                                                     ABL04915;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                3022 CGAG 3025
                                                                                                                                                                                                                                                                                                                       2967 CGAG 2970
                                                                                                                                                                                                                                                                                                                                                                     2902 GCCGCTAGACAAGATCGACTTCACGCTGACGAACCAACGACGACCTGATGGTCATCCG
                                                                                                                                                                                                                                                                                                                                                                                        2850 TGC---CAACCTAACCGGAATCTCTGTCAGTAGCCTGAGTGATAGCCTATTTGTGCTTCA
                                                                                                                                                                                                                                                                                                                                                                                                                  2842 GCTGAGCAACAAGGCTATATATGTCCTCGACGGCAAGACCTACAAGCAGAAGCACCGCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                    2790 GCTCACGCCCAGTGCTGTGGTCATTGTGGAGGATGCTAAAGTCAAGCAGAGAATTGATTA 2849
                                                                                                                                                                                                                                                                                                                                                                                                                                                               2782 CCAGTCCTTCTGCACCAAGTTCGATCGGCACGGCTACAAGTCCCGCGACCGCTTTATCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2730 TGCCGTGCCCGTGGTAAAATACGACCGTAAGGGTTACAAGCCTCGCCCCGGCCAGCTGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2722 GCACATCCAGCGAGTCAACGACTTCGTGGCCAGCACCTTCGGCAGCGGGGGGGCAGCTTAAGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2679 GGAGA-----TCAGCCCCAGAGTGCTTCAATCCTTGGGCTCTGAACCCATCCAGTA 2729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2662 GAAGAACTACGCGAGCAGTGTGTCCACTTGGTTCCAGGAGGACCGCATCCCCAAGGA 2721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2602 GCCCCAGCAGAAGAGGCAATTCGAGCTGAAGGTCCTGGCGGAGAAGGTCTTTAAGGGCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2499 AGAACTGCTACGGGAACTGTGCATGAAGAACATGGTGTGGGAAGTACTGCCGGAGCATCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2422 CAATGAAGAGTTTATTGCCAACGCCAAGCGTATGTGGCTGCTTCGACTGGCGAAGGAGCT 2481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2379 GAATECCTTCTTGGACCACGTGCGCGCCTCATTTTTGCTTAACCTGAGGCGGCAACT
                                                                                                                                                                                                                                                                                                                      CATACCGCTCGACCTGAAAAAGGACAAGGGCGACTTGATTCTGATCATTCCGCGCATAAT 3021
                                                                                                                                                                                                                                                                                                                                       GAAGGACAACTAGCCCCAGAGTGTCCCCAGACTCTTCATTAGCACACGGCTTGGCACAGA 2678
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCCTGAGTGGAAGCAGCTGCAGCAAAAGGCGGTGGCTAGTGAAATTTTCAAGGGCAA 2618
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CGGCATCCTTCACCGCCTGCACCGTCTCCACTTGGCCAGGATCTACCGCCTTAAACTGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GCCACCAAGGTACTGGATAAGAGCTGGCCCCATGCCCCTGGGCACTGCGAGGAGGGCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CGATAAGATTCGTGCCTTTATCAAGGGCTTCATCACCCGGAACGATGCCCCGAATGGCTT 2421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COAGACCATCCGTCGACCCATCCGTGGCTTCATTTTGCGCCATTCACCCCGGTGCCCTGA 2378
                                                                                                                                                                                     (first entry)
                                                                                                                                                                                                                                   ВР
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2541
```

Š 밁 Ş Вb Ş DЬ Ş

```
В
                                                                                            Qγ
                                                                                                                      Ъ
                                                                                                                                            Qy
                                                                                                                                                                        DЪ
                                                                                                                                                                                             Qγ
                                                                                                                                                                                                                        Ъ
                                                                                                                                                                                                                                              ΩV
                                                                                                                                                                                                                                                                       Ъ
                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                        Ъ
                                                                                                                                                                                                                                                                                                                                                Ω
                                                                                                                                                                                                                                                                                                                                                                          DЬ
                                                                                                                                                                                                                                                                                                                                                                                                γΩ
                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Sim
Matches 1700;
605 GTGGGAGGCCACATTCTCAGTTACCTCCTGGAAAAGTCCCGGGTGGTGCACCAAAATCAC
                                                                                     536 GÁCAACTCCTCGCGGTTCGGCAAGTACATGGACATCCAGTTCGATTTCAAAGGAGCTCCG 595
                                                                                                     545 GATAACTCCAGCCGGTTTGGAAAGTACATGGATGTGCAGGTTTGACTTCAAGGGTGCCCCC
                                                                                                                                       476 AAGCTGCTAAAGAGCAATCCCCGTGCTGGAGGCCTTCGGCAATGCCAAGACAAACCGCAAT 535
                                                                                                                                                     485 CGCCTGTTGCAGAGCAACCCCGTGTTAGAGGCCTTTGGGAATGCCAAGACTCTCCGCAAC 544
                                                                                                                                                                                      416 GTGCTGCAGTTCATAGCCGCCTGCTCCGGCAACCAGACGACGTCGAGGGCGTCAAGGAC 475
                                                                                                                                                                                                                                        356 GGCCAGTGCGTCATCTCCGGAGAGAGTGGTTCCGGCAAGACAGAGGCCTCCAAGAAG
                                                                                                                                                                                                                                                      305 CCACCTCATTTGTTTGCAGTGGCTGACACTGTATACCGGGCACTTCGTACTGAGCGTCGG 364
                                                                                                                                                                                                                                                                                                                                          236 CTGCCCATCTACACCGATGACCATGTCAAGGCGTACAGAAACAAGCACTTCTACGAGATG
                                                                                                                                                                                                                                                                                                                                                                                                245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               The invention relates to an isolated nucleic acid detection reagent capable of detecting 1000 or more genes from Drosophila. The invention is useful in developmental biology and in elucidating cell signalling and insecticides, therapeutics in higher eukaryotes for the development of discloses genomic DNA sequences (ABLIG176 ABL30511, expressed DNA sequences (ABLIG176 ABL30511, expressed DNA Sequences (ABLIG175) and the encoded proteins The sequence data for this patent did not form part of the printed at fft. wipo.int/pub/published_pct_sequences.
                                                                                                                                                                                                                                                                                                                                                                                                          185 GAGAACCTCATTTATACCTACATCGGTCCTGTCCTAGTCTCTGTCAATCCCTACCGAGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                            138 CTCCTCGAGAACTACCAGAGCGAAGAAGCCTTCATCGGGAATCTGAAGAAGCG-----
                                    ATCGGAGGCAACATCCTAAACTATCTGCTGGAAAAGTCGCGAGTGGTGGCTCAAATGGGA 655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 3349 BP; 871 A; 881 C; 898 G; 699 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           78 CAACTGAAAATGGAGACGGGCCTGCACGAGCGTGATCGTGCTGGAGTCCAGGACTTTGTG 137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          65 CGAGTGACCATGGAGAGCGCCTTGACTGCCCGAGACCGGGTAGGGGTGCAGGACTTTGTC 124
                                                                                                                                                                                                          CTGCTCCAGTTCTATGCAGAGACCTGCCCAGCCCCTGAACGGGGTGGCGCAGTGCGAGAG 484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local Similarity 58.1 hes 1700; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Claim 1; SEQ ID NO 9227; 21pp + Sequence Listing; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          New isolated nucleic acid detection reagent for detecting genes from Drosophila and for elucidating cell signalling interactions .
                                                                                                                                                                                                                                                                                         CCCCCACACATCTTTGCGGTGACTGACAACGCCTTCCGTTCGCTGATCGAGGAGAACCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Venter JC,
                                                                                                                                                                                                                                                                                                                                                               CTACAGATCTACAGCCGGCAGCATATGGAACGCTACCGTGGTGTCAGTTTCTATGAAGTA 304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (PEKE ) PE CORP NY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                           CTGCTGGAGAATTTCACCAGTGAGGGCTGCCTTCATTGAGAACCTCCGGCGGCGGCTTCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2001-656860/75.
                                                                                                                                                                                                                                                                                                                                                                                           ----ACCTACATTEGCCAGGTGTTGATCTCCGTGAATCCCTACAAGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Adams M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        23.9%;
58.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Li PWD,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 873.8; DB 23; Length 3349; Pred. No. 9.8e-236; O; Mismatches 1172; Indels 53;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Myers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels 53; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1000
and c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             or more cell
                                                                                                                                                                                                                                                                                                                                                                                                                    244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   is
```

멍

'n

1803 1783	1745 GACAAGAAGCGGCCAG-GACGGTGGCCACCCAGTTCAAGATGAGCCTCCTGCAGCTCGTG	
1744 1723	1685 ACCATGTGCAGCTCAATGAACCCCATCATGGCCCAGTGCTTTGACAAGAGTGAGCTCAGT	
1684 1663	1625 TACAGTGTGACTGGGTTTCTGGATAAAACAATGACCTCCTCTTCCGGAACCTGAAGGAG	
1624 1603	1565 ACCAGGAAATCCCTAGACCGAGGGGAGTTCCGCCTTCTGCATTATGCTGGAGAGGTGACC	
1564 1543	1505 TTGGAGGACACTGTCAAGCCCCACCCTCACTTCCTGACGCACAAGCTCGCTGACCAGAAG	
1504 1483	1445 ATCTTGGATGAAGAGTGCCTGCGTCCTGGGGAGGCCACGGACCTGACCTTTCTGGAGAAG	
1444 1423	1385 TACTTCAACAACAAGATCATCTGTGACCTGGTAGAGGGAGAAGTTCAAGGGCATCATCTCC	
1384 1363	1325 ACTCTCAAGTCGGAGCAGGAGGATACGAGGCTGAGGGCATCGCGTGGGAACCTGTCCAG	
1324 1303	1265 TTCGAGCAGTTCTGCATCAACTACTGCAATGAGAAGCTGCAGCAGCTCTTCATCGAGCTG	
1264 1243	1205 AGCACCACGGTTCTTGGGCTCCTGGACATTTACGGCTTTGAAGTGTTTCAGCATAACAGC	
1204 1186	1145 CTGGTCAGAAAGATCAATAGGTCACTGGCCTCTAAGGACGCTGAGAGCCCCAGCTGGCGA	
1144 1132	1085 CAGGCGGCATATGCAAGGGATGCGCTTGCCAAGGCTGTGTGTACAGCCGGACATTCACCTGG	
1084 1072	1025 CTGACCCACAGGAAGATCATCGCCAAGGGGGAAGAGCTCCTGAGCCCACTGAACCTTGAA	
1024 1012	965 AACCAGCTCAAATATCTGACCAGGCTCCTTGGTGTGGAAGGTACAACACTTAGGGAAGCC	
964 952	905 CATCTGGGCAACATCCACTTTGCTGCTGACGAGGACAGCAATGCCCAGGTTACTACTGAG 	
904 895	845 GTCATTGACTTCACTGAGGATGAAGTGGAGGACTTGCTCAGCATCGTGGCCAGCGTCCTA	
844 835	785 GCCAAGGTCTCCATCAACGACAAGAGTGACTGGAAGGTTATGAGGAAGGCGCTGTCC	
784 775	725 CGTCGGCTGGGCTTGGAACGGAACCCCCAGAGCTACTTGTACCTGGTGAAGGGCCAGTGT	
715	656 GGCGAGCGCAACTTCCACATCTTCTACCAACTCTTGGCCGGCGCCGACGAGGCCCTTCTG	

Ş

밁

оу оу оу ор QΥ В QΥ 밁 Qγ 망 Š В Qy В Q В Ş Вþ Qy В δÃ g οy В Q Ър ş В 04 Вb Ş 밁 οy

δÃ Ş QY Qy Q В δÃ 밁 QΥ Ъ Qy Вþ δÃ 망 Qy Db Qy 밁 δÃ В QУ 밁 Qy В Qy B Qy В Qy В QY В В DЬ DЪ B 1964 1904 1924 1844 1804 2444 2398 2324 2204 2158 2024 2038 2804 TATGTCCTCGACGGCAAGACCTACAAGCAGAAGCACCGCCTGCCGCTAGACAAGATCGAC 1984 GAGATCCTGAGGTCTAAGGAGCCTGCCTATATCCGGTGCATCAAGCCAAACGACGCCAAG TACGACCGTAAGGGTTACAAGCCTCGCCCCGGCAGCTGCTGCTCACGCCCAGTGCTGTG GACTTCGTGGCCAGCACCTTCGGCAGCGAGCAGCTTAAGTACCAGTCCTTCTGCACCAAG CACGTGCGCGCCTCATTTTTGCTTAACCTGAGGCGGCAACTGCCCCGGAATGTTCTGGAC GAGAATCTGCGCGTGCGCAGAGCTGGCCTTTGCCTATCGTCGCAAATATGAGGCTTTTCCTG GTCATTGTGGAGGATGCTAAAGTCAAGCAGAGAATTGATTATGC---CAACCTAACCGGA 2865 AGTGTCCCCAGACTCTTCATTAGCACAGGGCTTGGCACAGAGGGGAGA-----TCAGC CTGCAGCAAAAGGCGGTGGCTAGTGAAATTTTCAAGGGCAAGAAGGAACGACTACCCCCAG TGCATGAAGAACATGGTGTGGAAGTACTGCCGGAGCATCAGCCCTGAGTGGAAGCAGCAG GGCAGGACTAAGATCTTCATCCGATTCCCCCAAGACCTTATTTGCCCACAGAGGACTCCCCTG AAAGCGGGTGTCCAGCAGCTGGTGAAAGATTTGGGCTGGGACGAGGAAAAGTACAGGGTG CAGGATGGTGGGCCGTGTTGGTCAGACACCTCGGCTACAAGCCAGAAGAGTACAAAATG GAGAATCTGCGTGTGAGGCGAGCTGGTTTCGCCTACCGACGAACGTATGAGCTCTTCCTG CAGCCGGGTCGCTTTGATGAGGTGCTCATCCGACATCAGGTGAAGTACCTGGGACTGATG CCCAGAGTGCTTCAATCCTTGGGCTCTGAACCCATCCAGTATGCCGTGCCCGTGGTAAAA 2748 TTCGAGCTGAAGGTCCTGGCGGAGAAGGTCTTTAAGGGCAAGAAGAACAACTACGCGAGC CACCGTCTCCACTTGGCCAGGATCTACCGCCTTAAACTGACGCCGCAGCAGAAGAGGCAA AAGAGCTGGCCCCATGCCCTGGGCACTGCGAGGAGGCCTCCGGCATCCTTCACCGCCTG ACCTCCTGGCCCACCCCACCTGCCCTGAGAGAGGCCTCAGAACTGCTACGGGAACTG AACGCCAAGCGTATGTGGCTGCTTCGACTGGCGAAGGAGCTGCCCAACGAAGGTACTGGAT ATCAAGGGCTTCATCACCCGGAACGATGCCCCGAATGGCTTCAATGAAGAGTTTATTGCC ATCCGTGGCTTCATTTTGCGCCATTCACCCCGGTGCCCTGAGAATGCCTTCTTCGTGGAC AAGTTGGCACAGCAGGCGGCCAAGAAGCGCAGGGAGGCCGCCGATAAGATTCGTGCCTTT ACACTGGGCCGGAGGAAGGCAGCCAAGAGGGAAGTGGGCAGCCAGACCATCCGTCGACTC AGGAGGAAGTATCTGAAACTGCGTGCTCAGGTGATCATAATGCAGAGCTATTGTCGCCGA CGACAGAAATTTCTCCGGGTGAAGCGATCAGCCATCTGTATCCAGTCATGGTGGCGTGGC GGCGAGACGAAACTATTCATCCGCTGGCCGAGAACCTTGTTCGATACGGAGGATGCCTAC ACTGCCAACGTCTTCAACGATGAGTTGGTACTGCACCAGGTCAAGTACCTTGGCCTGATG AGTGTGTCCACTTGGTTCCAGGAGGACCGCATCCCCAAGGAGCACATCCAGCGAGTCAAC . 2203 2157 2863 2323 2263 2277 2217 1963 1903 1923 2743 2623 2637 2563 2337 2143 1983 1843 1863 2683 2688 2577 2503 2517 2443 2457 2383 2397 2083 2097 2023 2037

```
В
                                                                         ş
                                                                                                 ₽
                                                                                                                       Ş
                                                                                                                                                                                               Query Match
Best Local Similarity
Matches 1561; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                    The invention relates to an isolated nucleic acid detection reagent capable of detecting 1000 or more genes from Drosophila. The invention cell-cell in developmental biology and in elucidating cell signalling and insecticides, therapeutics and pharmaceutics for the development of discloses genomic DNA sequences (ABLO1840-ABL16175) and the encoded proteins (ABB57737-ABB72072)
                             437
                                                                                                                                                                                                   The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from at ftp.wipo.int/pub/published_pct_sequences.
                                                                                                                                                                             Sequence 6483 BP; 1768 A; 1550 C; 1583 G; 1582 T; 0 other;
                                                                                             317 TTTGCAGTGGCTGACACTGTATACCGGGCACTTCGTACTGAGCGTCGGGACCAGGCAGTG 376
                                                                                                                                                                                                                                                                                                                                           Claim 1; SEQ ID NO 10123; 21pp + Sequence Listing; English.
                                                                                                                                                                                                                                                                                                                                                                           New isolated nucleic acid detection reagent for detecting genes from Drosophila and for elucidating cell signalling
                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 2001-656860/75.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               23-MAR-2000;
11-JUL-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (PEKE ) PE CORP NY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             23-MAR-2001; 2001WO-US09231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Drosophila melanogaster
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Drosophila; developmental biology; cell signalling; insecticide;
pharmaceutical; gene; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Drosophila melanogaster genomic polynucleotide SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ABL19550 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        26-MAR-2002
TATGCAGAGACCTGCCCAGCCCCTGAACGGGGTGGGGCAGTGCGAGACCGCCTGTTGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ABL19550
                                  CTCATCTCCGGAGAGAGTGGTTCCGGCAAGACAGAGGCCTCCAAGAAGGTGCTGCAGTTC
                                                ATGATTTCTGGAGAGAGTGGGGGCAGGCAAGAGAGGCCACCAAGAGACTGCTCCAGTTC
                                                                              TTTGCGGTGACTGACAACGCCTTCCGTTCGCTGATCGAGGAGAACCGCGGCCAGTGCGTG 2297
                                                                                                                                                                                                                                                                                                                                                                                                                                                   JС,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAGGACAAGGGCGACTTGATTCTGATCATTCCGCGCATAATCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAGCAGAAGGGAGATGTGGTGCTGCAGAGTGATCATGTGATCGAG 2970
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TTCACGCTGACGAACCACAACGACGTGATGGTCATCCGCATACCGCTCGACCTGAAA 2923
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATCTCTGTCAGTAGCCTGAGTGATAGCCTATTTGTGCTTCACGTGCAGCGTGAAGACAAC
                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                               Adams M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2000US-191637P.
2000US-0614150.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (first entry)
                                                                                                                                                   20.5%;
57.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                              Li PWD,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  6483
                                                                                                                                     0;
                                                                                                                                                  Score 749.4;
Pred. No. 2e
                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                             Myers
                                                                                                                                                                                                                                                                                                                                                                                                                                           EW
                                                                                                                                                  2e-200;
                                                                                                                                    1081;
                                                                                                                                 Indels
                                                                                                                                                        Length 6483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       IJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NO 10123.
                                                                                                                                93;
                                                                                                                                                                                                                                                                                                                                                                             1000
and c
                                                                                                                                                                                                                                                                                                                                                                             0 or more cell-cell
                                                                                                                             Gaps
            496
                                                          436
                                                                                                                                                                                                                WIPO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2925
                                                                                                                             7;
                                                                                                                                                                                                                                                                                                         żs
```

```
Дb
                                        QΥ
                                                                 В
                                                                                        Qy
                                                                                                                   В
                                                                                                                                         δ
                                                                                                                                                                       Вþ
                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                       Ъ
                                                                                                                                                                                                                                            Q
                                                                                                                                                                                                                                                                        Ъ
                                                                                                                                                                                                                                                                                             Qy
                                                                                                                                                                                                                                                                                                                         Ъ
                                                                                                                                                                                                                                                                                                                                              Qy
                                                                                                                                                                                                                                                                                                                                                                       Ъ
                                                                                                                                                                                                                                                                                                                                                                                              ρy
                                                                                                                                                                                                                                                                                                                                                                                                                        Db
                                                                                                                                                                                                                                                                                                                                                                                                                                              Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DЪ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ΩV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Вb
                1455 AAGAGTGCCTGCGTCCTGGGGAGGCCACCGGACCTGTCTGGAGAAGTTGGAGGACA
                                                                                                                                                                1275 TCTGCATCAACTACTGCAATGAGAAGCTGCAGCAGCTCTTCATCGAGCTGACTCTCAAGT
                                                                                                                                                                                                                     3186
                                                                                                                                                                                                                                                                        3135
                                                                                                                                                                                                                                                                                               1155
                                                                                                                                                                                                                                                                                                                       3075
                                                                                                                                                                                                                                                                                                                                                1095
                                                                                                                                                                                                                                                                                                                                                                       3015
                                                                                                                                                                                                                                                                                                                                                                                                1035
                                                                                                                                                                                                                                                                                                                                                                                                                       2955
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2898
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2838
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2778
                                                                                                                                                                                                                                                                                                                                                                                                                                              975
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               915
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2418
677
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2358
                                                             ACAAGATCATGTGACCTGGTAGAGGAGAAGTTCAAGGGCATCATCTCCATCTTGGATG 1454
                                                                                                              CGGAGCAGGAGGAATACGAGGCTGAGGGCATCGCGTGGGAACCTGTCCAGTACTTCAACA 1394
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    617
                                              ACAAGGTGATTTGCAATCTGATCGAGGAGAAGCACAAGGGCATCATCTCCATACTGGACG
                                                                                                CGGAGCAGGATGAATACCGCCGGGAGGGCATCGAGTGGATACCTGTGGAGTACTTCGACA
                                                                                                                                                    TCTGCATCAATTTCTGCAACGAGAAGCTGCAGCAGCTGTTCATCGAGCTTACCCTTAAGT
                                                                                                                                                                                                    TGATGGGCATTCTGGACATCTATGGCTTCGAGATCTTCCAGAAGAACAGCTTTGAGCAGT
                                                                                                                                                                                                                   TTCTTGGGCTCCTGGACATTTACGGCTTTGAAGTGTTTCAGCATAACAGCTTCGAGCAGT 1274
                                                                                                                                                                                                                                                     GCCTCAACATCTCGCTGCAGGCGAAGGAAACGCGGGCATCC-----AGAAATAATG
                                                                                                                                                                                                                                                                      AGATCAATAGGTCACTGGCCTCTAAGGACCCTGAGAGCCCCAGCTGGCGAAGCACCACGG
                                                                                                                                                                                                                                                                                                                     GGAAGATCATCGCCAAGGGGGAAGAGCTCCTGAGCCCACTGAACCTTGAACAGGCGGCAT
                                                                                                                                                                                                                                                                                                                                                     GCACAATTGACGCTCGGGGAGATGTGGTGACCTCACCACTGAACCAGGAGCTCGCCATCT
                                                                                                                                                                                                                                                                                                                                                                                                     TCACCGCTGCTTTGCTGGGTGTAAACGCAAGCGAACTGGAAGCCGCCCTAACGCACC
                                                                                                                                                                                                                                                                                                                                                                                                                    AATATCTGACCAGGCTCCTTGGTGTGGAAGGTACAACACTTAGGGAAGCCCTGACCCACA 1034
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TCACTGAGGATGAAGTGGAGGACTTGCTCAGCATCGTGGCCAGCGTCCTACATCTGGGCA 914
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACATCCACTTTGCTGCTGACGAGGACAGCAATGCCCAGGTTACTACTGAGAACCAGCTCA 974
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CGAGAATTAACGATGCGGACAGCTTCAAGCAGGTCCAGCAGGCTCTCACTGTGATCGATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACGTTGGCTT----CACTGAGGTGGAGGGCAATGCCAAGGTGAACAGCAGGGATCTGGTAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CCTCCATCAACGACAAGAGTGACTGGAAGGTTATGAGGAAGGCGCTGTCCGTCATTGACT 854
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGGTATTGACAATTGGTCTCTGATCTTCGAGTTCTAATCCACAGCTCAATGGCACCGTGA 2777
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CTGGAGCGGGCTCTGGACACTTATAGCTACCTGACAGATGGGGTAAGTGGGCAGCCTGGA 2717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TTGGAACGGAACCCCCAGAGCTACTTGTACCTGGTGAAGGGCCCAGTGTGCCCAAG----- 790
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TTCCACATCTTCTACCAACTCTTGGCCGGCGCCGACGAGGCCCTTCTGCAGGAACTGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TTCCACGTCTTTTACCAGCTACTGGAGGGGGGGGGGGGAGGAGACTCTCCGGTCGGCTGGGC 736
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATCCTAAACTÁTCTGCTGGÁAAAGTCGCGAGTGGTGGCTCÁAATGGGAGGCGAGCGCÁAC 2597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATTCTCAGTTACCTCCTGGAAAAGTCCCGGGTGGTGCACCAAAATCACGGAGAGCGGAAC 676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CGTTCGGCAAGTACATGGACATCCAGTTCGATTTCAAAGGAGCTCCGATCGGAGGCAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CGGTTTGGAAAGTACATGGATGTGCAGTTTGACTTCAAGGGTGCCCCCGTGGGAGGCCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATAGCCGCCTGCTCCGGCAACCAGACGACCGTCGAGGGCGTCAAGGACAAGCTGCTAAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AGCAACCCCGTGTTAGAGGCCTTTTGGGAATGCCAAGACTCTCCGCAACGATAACTCCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GTCT
3485
                       1514
                                               3425
                                                                                                                                                                                                                                                                                                                                                                                                     3014
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2837
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  794
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2657
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   616
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2417
```

٠ _ . •

```
망
                                                                                                                                                                                                                                                                                                                                                                   QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q
 В
                               δÃ
                                                           Ъ
                                                                                            Q
                                                                                                                                   В
                                                                                                                                                                 ρy
                                                                                                                                                                                                    B
                                                                                                                                                                                                                                ð
                                                                                                                                                                                                                                                                      DЬ
                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                                                                                                        Бр
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
   4506
                                                                    4446
                                                                                                                                                                                                       4326
                                                                                                                                                                                                                                                                        4266
                                                                                                                                                                                                                                                                                                                                         4206
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4086
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4026
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3906
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3846
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3666
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1515
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3966
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1934
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3786
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1755
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1695
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3606
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1635
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3486
                                                                                                                                                                                                                                                                                                        2288
                                                                                                                                                                                                                                                                                                                                                                          2228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2048
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1874
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1814
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CTGGGTTTCTGGATAAAAACAATGACCTCCTCTTCCGGAACCTGAAGGAGACCATGTGCA
                                                                                                CCACACCCCCACCTGCCCTGAGAGAGGCCTCAGAACTGCTACGGGAACTGTGCATGAAGA
                                                                                                                                   GTATGTGGCTGCCTTCGACTGGCGAAGGAGCTGCCCACCAAGGTACTGGATAAGAGCTGGC
                                                                                                                                                    CCTCATTTTTGCTTAACCTGAGGCGGCAACTGCCCCGGAATGTTCTGGACACCTCCTGGC
                                                                                                                                                                                                    TCATCACCCGGAACGATGCCCCGAATGGCTTCAATGAAGAGTTTATTGCCAACGCCAAGC
                                                                                                                                                                                                                                   TCATTTTGCGCCCATTCACCCCGGTGCCCTGAGAATGCCTTCTTCTTGGACCACGTGCGCG
                                                                                                                                                                                                                                                                     AGCAGGCGGCCAAGAAGCGCAGGGAGGCCGCCGATAAGATTCGTGCCTTTATCAAGGGCT
                                                                                                                                                                                                                                                                                                      GGAGGAAGGCAGCCAAGAGGAAGTGGGCAGCCCAGACCATCCGTCGACTCATCCGTGGCT
                                                                                                                                                                                                                                                                                                                                       ATCTGAAACTGCGTGCTCAGGTGATCATAATGCAGAGCTATTGTCGCCGAAAGTTGGCAC
                                                                                                                                                                                                                                                                                                                                                                       TTCTCCGGGTGAAGCGATCAGCCATCTGTATCCAGTCATGGTGGCGTGGCACACTGGGCC
                                                                                                                                                                                                                                                                                                                                                                                                        AACATGAGATAGCGGCCATCATCCAGGCCCACTGGAAGGGATTGATGCAAAGGAGGAAGT
                                                                                                                                                                                                                                                                                                                                                                                                                          GGCAGAGTCTAGCCACCAAGATCCAGGCGGCCTGGAGGGGCTTTCATTGGCGACAGAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AACTATTCATCCGCTGGCCGAGAACCTTGTTCGATACGGAGGATGCCTACCAGGAGAAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AGATCTTCATCCGATTCCCCAAGACCTTATTTGCCACAGAGGACTCCCTGGAAGTCCGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TCCAGCAGCTGGTGAAAGATTTGGGCTGGGACGAGGAAAAGTACAGGGTGGGCGAGACGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TGGCCGTGTTGGTCAGACACCTCGGCTACAAGCCAGAGAGTACAAAATGGGCAGGACTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AGTCACTGTGCCCAGAGACATGGCC-----CATGTGGGCAGGACGGCCCCAGGATGGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GTGTGAGGCGAGCTGGTTTCGCCTACCGACGAACGTATGAGCTCTTCCTGGAGCGCTACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GCGTGCGCAGAGCTGGCTTTGCCTATCGTCGCAAATATGAGGCTTTCCTGCAGAGGTACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TCTTCAACGATGAGTTGGTACTGCACCAGGTCAAGTACCTTGGCCTGATGGAGAATCTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GCTTTGATGAGGTGCTCATCCGACATCAGGTGAAGTACCTGGGACTGATGGAGAATCTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TGTGCAAGGAGCCGAGCTACATTCGCTGCATCAAGCCAAACGACCTGCAGACTGCCAACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGTCTAAGGAGCCTGCCTATATCCGGTGCATCAAGCCAAACGACGCCAAGCAGCCGGGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GTCCGGAGACGGCTATCACCCAGTTCCGGGCATCTCTTAACAACCTCATGGACATTCTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGCCAG-GACGGTGGCCACCCAGTTCAAGATGAGCCTCCTGCAGCTCGTGGAGATCCTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AGGCTGGCAACGGCATTGTGAGGAACTGCTTCCCGGAGAAGGAGCTGCGCAGCCTGAAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GCTCAATGAACCCCATCATGGCCCAGTGCTTTGACAAGAGTGAGCTCAGTGACAAGAAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATGGATTCCTGGACAAGAACAACGACCTGTTGTTCAGGGATCTAAAGGAGACCCTCAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TCATGCTGCGCGATGAGTTCCGCTTGGTGCACTATGCCGGCGAGGTCACCTACAGTGTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCCTAGACCGAGGGGAGTTCCGCCTTCTGCATTATGCTGGAGAGGGTGACCTACAGTGTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AATTGGCCCAGCACCACCACTACGTTTGCCACGAAAAGGCGCCCCGCCCACATCAAGAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CTGTCAAGCCCCACCCTCACTTCCTGACGCACAAGCTCGCTGACCAGAAGACCAGGAAAT
                                 ACATGGTGTGGAAGTACTGCCGGAGCATCAGCCCTGAGTGGAAGCAGCAGCTGCAGCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGTCCCTGAGCAAGTCCACCTGGCCCAATTACAAGGGTCCCGGTGGCCCGAAAGCGGGTG
ACTTGGCCAGGATCTACCGCCTTAAACTGACGCCGCAGCAGGAAGAGGCAATTCGAGCTGA
                                                                  CCCATGCCCCTGGGCACTGCGAGGAGGCCTCCGGCATCCTTCACCGCCTGCACCGTCTCC
                                                                                                                                                                                                                                                                                                                                                                       2287
 4565
                                                                4505
                                                                                                                                 4445
                                                                                                                                                                                                    4385
                                                                                                                                                                                                                                     2407
                                                                                                                                                                                                                                                                      4325
                                                                                                                                                                                                                                                                                                        2347
                                                                                                                                                                                                                                                                                                                                         4265
                                                                                                                                                                                                                                                                                                                                                                                                        4205
                                                                                                                                                                                                                                                                                                                                                                                                                                         2227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4085
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4025
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2047
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3965
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3905
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1933
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3845
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1813
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1754
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3665
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3605
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1634
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1574
```

δõ

```
RESULT 8
ABL04914
ABL04914
AC ABL0
XX ABL0
XX ABL0
XX Dros
XX 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DЪ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   QY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DЪ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ωy
The invention relates to an isolated nucleic acid detection reagent capable of detecting 1000 or more genes from Drosophila. The invention useful in developmental biology and in elucidating cell signalling and cell-cell interactions in higher eukaryotes for the development of insecticides, therapeutics and pharmaceutical drugs. The invention discloses genomic DNA sequences (ABLIG176-ABL30511), expressed DNA sequences (ABLIG1840-ABLIG1875) and the encoded proteins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                23-MAR-2000;
11-JUL-2000;
                                                                                                                                                                                                                           Claim 1;
                                                                                                                                                                                                                                                                                                       genes from Drosophila
                                                                                                                                                                                                                                                                                                                                    New isolated nucleic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Venter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   23-MAR-2001; 2001WO-US09231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         27-SEP-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO200171042-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Drosophila melanogaster
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        pharmaceutical;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Drosophila;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Drosophila melanogaster expressed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              26-MAR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ABL04914;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ABL04914 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (PEKE ) PE
                                                                                                                                                                                                                                                                                                                                                                                          2001-656860/75.
DB; ABB60811.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GCGACTTGATTCTGATCATTCCGCGCATAATCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GAGATGTGGTGCTGCAGAGTGATCATGTGATCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GACTCTTCATTAGCACACGGCTTGGCACAGAGGAGA----TCAGCCCCCAGAGTGC 2698
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGGTCCTGGCGAGAAGGTCTTTAAGGGCAAGAAGAACAACTACGCGAGCAGTGTGTCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CGAACCACAACGACGACCTGATGGTCATCCGCATACCGCTCGACCTGAAAAAGGACAAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GTAGCCTGAGTGATAGCCTATTTGTGCTTCACGTGCAGCGTGAAGACAACAAGCAGAAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACGGCAAGACCTACAAGCAGAAGCACCGCCTGCCGCTAGACAAGATCGACTTCACGCTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AGGATGCTAAAGTCAAGCAGAGAATTGATTATGC---CAACCTAACCGGAATCTCTGTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACGGCTACAAGTCCCGCGACCGCTTTATCCTGCTGAGCAACAAGGCTATATATGTCCTCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AGGGTTACAAGCCTCGCCCCGGCAGCTGCTGCTCACGCCCAGTGCTGTGGTCATTGTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CCAGCACCTTCGGCAGCGAGCAGCTTAAGTACCAGTCCTTCTGCACCAAGTTCGATCGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TTCAATCCTTGGGCTCTGAACCCATCCAGTATGCCGTGCCCGTGGTAAAATACGACCGTA 2758
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CTTGGTTCCAGGAGGACCGCATCCCCAAGGAGCACATCCAGCGAGTCAACGACTTCGTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AGGCGGTGGCTAGTGAAATTTTCAAGGGCAAGAAGGACAACTACCCCCAGAGTGTCCCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JC,
                                                                                                                                                                                                                     SEQ ID NO 9224; 21pp + Sequence Listing; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CORP NY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  developmental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Adams
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2000US-191637P
2000US-0614150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     gene;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Z
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       cDNA;
                                                                                                                                                                                                                                                                                                       acid
a and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ŀi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          7057
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PWD,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  biology;
                                                                                                                                                                                                                                                                                                     detection reagent for detecting for elucidating cell signalling
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Myers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     polynucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             뛷
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               signalling;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2970
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  insecticide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        IJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                          and
                                                                                                                                                                                                                                                                                                                                    1000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9224
                                                                                                                                                                                                                                                                                                          cell-cell
                                                                                                                                                                                                                                                                                                                                 or more
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 4685
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4745
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4625
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4925
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2935
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4865
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2875
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4805
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2647
                                                                                                                                        is
```

გგგგჯფ

```
Ъ
                                                                                                                                                                                                                                                                                                                                          Ş
1155 AGATCAATAGGTCACTGGCCTCTAAGGACGCTGAGAGCCCCAGCTGGCGAAGCACCACGG 1214
                                                                                                                                                                                                                                                                                                                                                                  д
                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Дb
                                   Ъ
                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ф
                                                                                                1035 GGAAGATCATCGCCAAGGGGGAAGAGCTCCTGAAGCCCACTGAACCTTGAACAGGCGGCAT 1094
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                  3529 TCACCGCTGCTCGTTTGCTGGGTGTAAACGCAAGCGAACTGGAAGCCGCCCTAACGCACC 3588
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Д
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                 3472 ACGTTGGCTT---CACTGAGGTGAGGGCAATGCCAAGGTGAACAGCAGGATCTGGTAG 3528
                                                                                                                                                                                                                              855 TCACTGAGGATGAAGTGGAGGACTTGCTCAGCATCGTGGCCAGCGTCCTACATCTGGGCA 914
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ДЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δõ
                                                                                                                                                 975 AATATCTGACCAGGCTCCTTGGTGTGGAAGGTACAACACTTAGGGAAGCCCTGACCCACA 1034
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                915 ACATCCACTTTGCTGCTGACGAGGACAGCAGCAGTTACTACTACTGAGAACCAGCTCA 974
                                                                                                                                                                                                                                                                             3352 CGAGAÁTTAÁCGÁTGCGGACAGCTTCAÁGCAGGTCCAGCÁGCTCTCACTGTGÁTCGÁTT 3411
                                                                                                                                                                                                                                                                                                                           3292 GGGTATTGACAATTGGTCTCTGATCTTCGAGTTCTAATCCACAGCTCAATGGCACCGTGA 3351
                                                                                                                                                                                                                                                                                                                                                                          3232 CTGGAGCGGGCTCTGGACACTTATAGCTACCTGACAGATGGGGTAAGTGGGCAGCCTGGA 3291
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local S
                                                                                                                                                                                                                                                                                              795 CCTCCATCAACGACAAGAGTGACTGGAAGGTTATGAGGAAGGCGCTGTCCGTCATTGACT 854
                                                                                                                                                                                                                                                                                                                                                                                                                         3172 Trocacaterretaceaacrerreseccesecesaceasecerrerecaseaacrecee 3231
                                                                                                                                                                                                                                                                                                                                                   737 TTGGAACGGAACCCCCAGAGCTACTTGTACCTGGTGAAGGGCCAGTGTGCCAAG----- 790
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3112 ATCCTANACTATCTGCTGGAAAAGTCGCGAGTGGTGGCTCAAATGGGAGGCGAGCGCAAC 3171
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     677 TTCCACGTCTTTTACCAGCTACTGGAGGGGGGGGGGAGGAGGAGACTCTCCGTCGGCTGGGC 736
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches 1561; Conserv
                                                                                   GCACAATTGACCCTCGGGGAGATGTGGTGACCTCACCACTGAACCAGGAGCTCCCCATCT 3648
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      617 ATTCTCAGTTACCTCGTGGAAAAGTCCCCGGGTGGTGCACCAAAATCACGGAGAGCGGAAC 676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2992 AGCAATTCCCGTGCTGGAGGCCTTCCGGCAATGCCAAGACAAACCGCAATGACAACTCCTCG 3051
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2932 ATAGCCGCCTGCTCCGGCAACCAGACGACGGTCGAGGGCGTCAAGGACAAGCTGCTAAAG 2991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   497 AGCAACCCCGTGTTAGAGGCCTTTGGGAATGCCAAGACTCTCCGCAACGATAACTCCAGC 556
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               377 ATGATTTCTGGAGAGTGGGGGCAGGCAAGACAGAGGCCACCAAGAGACTGCTCCAGTTC 436
2872 CTCATCTCCGGAGAGTGGTTCCGGCAAGAGACAGCCTCCAAGAGACTGCTCCAGTTC 436
2872 CTCATCTCCGGAGAGAGTGGTTCCGGCAAGACAGAGGCCTCCAAGAAGGTGCTGCAGTTC 2931
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2812 TTTGCGGTGACTGACAACGCCTTCCGTTCGCTGATCGAGGAGAACCGCGGCCAGTGCGTG 2871
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        437 TATGCAGAGACCTGCCCAGCCCCTGAACGGGTGGCGCAGTGCGGAGACCGCCTGTTGCAG 496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             317 TTTGCAGTGGCTGACACTGTATACCGGGCACTTCGTACTGAGCGTCGGGACCAGGCAGTG 376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 7057 BP; 1940 A; 1678 C; 1698 G; 1741 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                20.5%; Score 749.4; DB 23; Length 7057; 57.1%; Pred. No. 2.1e-200; vative 0; Mismatches 1081; Indels 93;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              7;
```

ş Ъ ρ В Ş В Ş В Ş

20222222222	24 PP
153 411 163 163 164 169 169 169 169 169 169 169 169 169 169	11 11 11 11 11 11 11 11 11 11 11 11 11
75 CO PO	370 121 121 761 761 275 275 275 275 275 180 180 180 195 195 195 195 195 195 195 195 195 195
ARTER CCTA CCTA TCAA TCAA TCAA TCAA TCAA TCA	9 GC 5 TT 1 TC 1 TC 1 TC 1 TC 1 TC 1 TC 1 TC 1
GCAT GCAAC CTGC CTGC CTGC CTGC CTGC CTGC CTGC III GCAA III GCAA III GCAA III GCAA GAAC IIII GCAA GCA	CTCL CTTG CTTG CTTG CTTG CTTG CTTG CTTG
SAGE SIGNAR SIGN	ACA: GCAT GCATC GCATC GCATC GCATC GGAT GGAT
ACCA ACCA ACCA ATTAL ATT	PCTC:
ANTIGECCAGEAGGAGTTCCGCCAGT TO TEATECTEGGCATTCTGGAGAACAACT TO TEATECTEGGCATTCTGGAGAACAACAATT TO AGGCTGGATTCTGGAGAACAACAATT AGGCTCAATGAACCACTATTCATGCCC AGGCTGGATTCTGGACAACAACAATT AGGCTGAATGAACCACCACTATTCATGCCC AGGCTGGAAGAACGAGT AGGCTGCAACGGATTGTGAGGA GCTCAATGAACCACCAGT AGTCCAAGAACCAGCATTCATGCCCAGT GTCCGGAGAGCGCTATATACCCAGT GTCCGGAGAGCGCTATATACCCAGT GTCTCAAGGAGCTGCTATATCCCAGT GTCTCAAGGAGCTGCTATCACCAGT GTCTCAAGGAGCTGCTATCACCAGCA TCTTCAAGGAGCTGCTATCCCACACATTCAGCACATTCAGCACATTCAGCCTACATCACCTACCACATTCAGCCTACATCACCTACACATCACCTACACATCACCTACACATCACCTACACACACCTACACACCTACACACACCTACACACCTACACACCTACACACCTACACACCTACACACCTACACACCTACACACCTACACACCTACACACCTACACCTACACCTACACCTACACCTACACCTACACCTCAGCCCTACACACCTACCACACACCTACACCTCAGCCCTACACCTCACCTACCACCACACACCTACACCACACACCTACCACACACCTACACCCTACCACACACCCACACACCCACACACCCTACCACACACCCTACCACC	GCTG GCTG H
CCCAPTACCCCCACCCCCCCCCCCCCCCCCCCCCCCCCC	CAGG ATTT
ANTIGOCICAGGÁCÓACIA, III	9 GCCTCAACATCTCGCTGCAGGCGAAGGAAACGCGGGGCATCC
IIII IIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	CTTI CTTI CTTI CTTC CTTC CTTC CTCC CTCC CCCC CCCC CCCC CCCC CCCC CCCC CCCC
TTCG IIII IIII IIIII IIIIIIIIIIIIIIIIIII	VACGO GGAAC II GGAGA GAGA GAGA III III III III III
AAAGGAAAACCCTTGCCCTGCAAAAACCCTTGCCTTGCCCTTGCCTTGCCCTTGCCTTGCCCTTGCCCTTGCCTTGCCCTTGCCTTGCCTTGCCCTTGCCTTGCCCTTGCCTTGCCCTTGCCTTGCCCTTGCCCTTGCCTTGCCCTTGCCTTGCCCTTGCCTTGCCCTTGCCTTGCCCTTGCCTTGCCCTTGCCTTGCCTTGCCCTTGCCTTGCCCTTGCCTTGCCCTTGCCTTGCCCTTGCCTTGCCCTTGCCTTGCCCTTGCCTTGCCCTTGCCTTGCCCTTGCCTTGCCCTTGCCTTGCCCTTGCCTTGCCTTGCCTTGCCCTTGCCCTTGCCTTTGCCTTTGCCCTTTTGCCCTTTGCCCTTTTGCCCTTTTGCCCTTTTGCCCTTTTGCCCTTTTGCCCTTTTGCCCTTTTGCCCTTTTGCCCTTTTGCCCTTTTGCCCTTTTGCCCTTTTGCCCTTTTGCCCTTTTGCCCTTTTGCCCTTTTTGCCCTTTTTGCCCTTTTTGCCCTTTTTGCCCTTTTTT	GGGG
COCCENTY COLOR COL	CATC CATC ITTCA IT
COCCECTOR COCCETOR COCCECTOR COCCECTOR COCCECTOR COCCECTOR COCCECTOR COCCETOR COCCECTOR COCCECTOR COCCECTOR COCCECTOR COCCECTOR COCCETOR COCCECTOR COCCETOR COCCECTOR COCCECTOR COCCECTOR COCCECTOR COCCECTOR COCCETOR COCCECTOR COCCECTOR COCCECTOR COCCECTOR COCCECTOR COCCETOR COCCECTOR COCCETOR COC	C GCAT GAAGG AATCC IIII AATCC CCTG IIII IIII CCTGAT CC
SAAG CAC.	AACA HIII AACA AACA TIGAACI TIGAACI TIGAACI TIGAACI TIGAACI TIGAACI
FACAN ACCAT ACCAT ACCAT ACCAT ACCAT ACCAT ACCAT BCATC	GCTTCCCTCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
TIGGETT GGAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	SAAA PCĞA PCĞA TCTC TCTC CCTT CCTTTC CTTTCC IIII IIII
187 187 187 187 187 187 187 187 187 187	- H-0 B-9 H-0 0-0 5
r 1574 4119 1634 4179 1694 4239 1754 4229 1754 429 1813 1359 1873 1873 933 39 947 999	3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3
	7759 2274 1119 334 379 394 4

```
RESULT 9
AAH02967
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
Š
                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Вр
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Q
                                                                                                                                                                                                                                                                                                                                                                      5500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2648
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2528
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2408
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4840
            01-OCT-1999;
                                                                                                WO200125427-A1
                                                                                                                                                           arteriosclerosis;
                                                                                                                                                                       Human; shear stress-response
                                                                                                                                                                                                                                                                                          AAH02967 standard; DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2288
                                       02-OCT-2000;
                                                                                                                                                                                                                                 15-JUN-2001
                                                                      12-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                   GAGATGTGGTGCTGCAGAGTGATCATGTGATCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GACTCTTCATTAGCACACGGCTTGGCACAGAGGAGA-----TCAGCCCCAGAGTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACATGGTGTGGAAGTACTGCCGGAGCATCAGCCCTGAGTGGAAGCAGCAGCTGCAGCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CCACACCCCCACCTGCCCTGAGAGAGGCCTCAGAACTGCTGCGGGAACTGTGCATGAAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCTCATTTTTGCTTAACCTGAGGCGGCAACTGCCCCGGAATGTTCTGGACACCTCCTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGAGGAAGCCAAGAGGAAGTGGGCAGCCCAGACCATCCGTCGACTCATCCGTGGCT 2347
                                                                                                                              sapiens
                                                                                                                                                                                                                                                                                                                                                                  GCGACTTGATTCTGATCATTCCGCGCATAATCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                       GTAGCCTGAGTGATAGCCTATTTGTGCTTCACGTGCAGCGTGAAGACAACAAGCAGGAAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AGGGTTACAAGCCTCGCCCCGGCAGCTGCTGCTCACGCCCAGTGCTGTGGTCATTGTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCAGCACCTTCGGCAGCGAGCAGCTTAAGTACCAGTCCTTCTGCACCAAGTTCGATCGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTTGGTTCCAGGAGGACCGCATCCCCAAGGAGCACATCCAGCGAGTCAACGACTTCGTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGGCGGTGGCTAGTGAAATTTTCAAGGGCAAGAAGGACAACTACCCCCCAGAGTGTCCCCCA
                                                                                                                                                                                                                                                                                                                                                                                                                           CGAACCACAACGACCTGATGGTCATCCGCATACCGCTCGACCTGAAAAAAGGACAAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AGGATGCTAAAGTCAAGCAGAGAATTGATTATGC---CAACCTAACCGGAATCTCTGTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACGGCTACAAGTCCCGCGACCGCTTTATCCTGCTGAGCAACAAGGCTATATATGTCCTCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TTCAATCCTTGGGCTCTGAACCCATCCAGTATGCCGTGCCCGTGGTAAAATACGACCGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACTTGGCCAGGATCTACCGCCTTAAACTGACGCCGCAGCAGAAGAGGCCAATTCGAGCTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CCCATGCCCCTGGGCACTGCGAGGAGGCCTCCGGCATCCTTCACCGCCTGCACCGTCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GTATGTGGCTGCTTCGACTGGCGAAGGAGCTGCCCACCAAGGTACTGGATAAGAGCTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TCATTTTGCGCCATTCACCCCGGTGCCCTGAGAATGCCTTCTTCTTGGACCACGTGCGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGCAGGCGGCCAAGAAGCGCAGGGAGGCCGCCGATAAGATTCGTGCCTTTATCAAGGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACGGCAAGACCTACAAGCAGAAGCACCGCCTGCCGCTAGACAAGATCGACTTCACGCTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AGGTCCTGGCGGAGAAGGTCTTTAAGGGCAAGAAGAACAACTACGCGAGCAGTGTGTCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TCATCACCCGGAACGATGCCCCGAATGGCTTCAATGAAGAGTTTATTGCCAACGCCAAGC
                                                                                                                                                                                                   shear stress-response coding sequence
                                                                                                                                                                                                                                (first entry)
                                         2000WO-JP06840
                                                                                                                                                                                                                                                                                            2560
                                                                                                                                                                       protein;
                                                                                                                                                                         vascular disease;
                                                                                                                                                                                                                                                                                                                                                                                                2970
                                                                                                                                                                                                   SEQ
                                                                                                                                                                                                   ID
                                                                                                                                                                                                      <u>N</u>O:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2875
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2758
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2698
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2647
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5019
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2467
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4959
                                                                                                                                                                                                                                                                                                                                                                                                                             5499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2818
```

```
Š
                                       δÃ
                                                             В
                                                                               Qy
                                                                                                      Вþ
                                                                                                                         δÃ
                                                                                                                                               В
                                                                                                                                                                 QУ
                                                                                                                                                                                        В
                                                                                                                                                                                                           Qy
                                                                                                                                                                                                                                 Вþ
                                                                                                                                                                                                                                                   Qy
                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                              δÃ
                                                                                                                                                                                                                                                                                                                     DЬ
                                                                                                                                                                                                                                                                                                                                      QΥ
                                                                                                                                                                                                                                                                                                                                                               Дb
                                                                                                                                                                                                                                                                                                                                                                                 Ωy
                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                        Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  QУ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local S
Matches 832
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The present invention provides the protein and coding sequences of a number of human shear stress response proteins. These are useful in diagnosis, treatment and screening of vascular diseases caused by arterioscierosis, including heart failure, post-PTCA restenosis and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claim 1; Page 662-664; 678pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DNA sequences, proteins useful in diagnosis and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 2560 BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          arteriosclerosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (KYOW ) KYOWA HAKKO KOGYO (NOJI/) NOJIMA H.
 704
                                        644
                                                             817
                                                                                                      757
                                                                                                                          524
                                                                                                                                                697
                                                                                                                                                                     464
                                                                                                                                                                                        637
                                                                                                                                                                                                             404
                                                                                                                                                                                                                                  577
                                                                                                                                                                                                                                                      344
                                                                                                                                                                                                                                                                            517
                                                                                                                                                                                                                                                                                                284
                                                                                                                                                                                                                                                                                                                      457
                                                                                                                                                                                                                                                                                                                                          224
                                                                                                                                                                                                                                                                                                                                                               397
                                                                                                                                                                                                                                                                                                                                                                                   164
                                                                                                                                                                                                                                                                                                                                                                                                       337
                                                                                                                                                                                                                                                                                                                                                                                                                           104
                                                                                                                                                                                                                                                                                                                                                                                                                                                277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    44
                              CGGGTGGTGCACCAAAATCACGGAGAGGGGAACTTCCACGTCTTTTACCAGCTACTGGAG
                                                           AATGCCAAGACTCTCCGCAACGATAACTCCAGCCGGTTTGGAAAGTACATGGATGTGCAG
                                                                                                                                             CGGGGTGGCGCAGTGCGAGACCGCCTGTTGCAGAGCAACCCCCGTGTTAGAGGCCCTTTGGG
                                                                                                                                                                                      AAGACAGAGGCCACCAAGAGACTGCTCCAGTTCTATGCAGAGACCTGCCCAGCCCCCTGAA
                                                                                                                                                                                                                                                                                                                    GCCCTGGGCAGTGACGGGGTTCGAGTGACCATGGAGAGCGCCTTGACTGCCCGAGACCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2001-266308/27
DB; AAB90827.
                                                                                                                                                                                                                                 GCACTTCGTACTGAGCGTCGGGACCAGGCAGTGATGATTTCTGGAGAGAGTGGGGCAGGC
                                                                                                                                                                                                                                                                        AACCTCCGGCGGCGGTTCCGGGAGAACCTCATTTATACCTACATCGGTCCTGTCCTAGTC
                                                                                                                                                                                                                                                                                                                                                                                                                          GTAGGGGTGCAGGACTTTGTCCTGCTGGAGAATTTCACCAGTGAGGCTGCCTTCATTGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         al Similarity
832; Conserv
 GGGGGCGAGGAGGAGACTCTCCGTCGGCTGGGCTTGGAACGGAACCCCCCAGAGCTACTTG
                   CGAGTGGTGCACCAGAATCATGGGGAGCGGAACTT-CACATCTTCTACCAGCTGCTGGAG
                                                                                                                                                                                                                                                                                                GGTGTCAGTTTCTATGAAGTACCACCTCATTTGTTTGCAGTGGCTGACACTGTATACCGG
                                                                                                                                                                                                                                                                                                                                                                                                      GTGGGGGTGCAGGATTTCGTGCTGCTGGAGAACTTCACCAGCGAGGCCGCCTTCATCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                               GCCCTGGGCAGTGACGGGTTCGGGTGACCATGGAGAGTGCGCTCACCGCCCGTGACCGG
                                                                                                                                                                                                                                                                                                                                                               AACCTGCGGCGGCGATTTCGGGAGAATCTCATCTACACCTACATTGGCCCCGTCCTGGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Yoshisue
Sekine S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 543 A; 761
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Nakamura
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Η,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   encoded by them and antibodies treatment of vascular disease
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Obayashi M, Ota T, amura Y, Sugano S;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           X
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 745.2; DB Pred. No. 1.8e-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 C; 746
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ç;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 510
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         108;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Kawabata
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     s against
caused b
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ά,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sakurada K;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    γď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                a
in the
                                                                                                                                                                                                             463
                                                                                                                                                                                                                                                                                                                                                                                                                           163
                                                                                                                                                                                                                                                                                                                                                                                                                                               336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    103
                                                                                                     816
                                                                                                                                               756
                                                                                                                                                                                                                                                     403
                                                                                                                                                                                                                                                                         5,76
                                        703
                                                            876
                                                                                 643
                                                                                                                                                                                        696
                                                                                                                                                                                                                                  636
                                                                                                                                                                                                                                                                                                                     516
                                                                                                                                                                                                                                                                                                                                         283
                                                                                                                                                                                                                                                                                                                                                               456
                                                                                                                                                                                                                                                                                                                                                                                 223
                                                                                                                                                                                                                                                                                                                                                                                                      396
 763
                    935
                                                                                                                         583
                                                                                                                                                                                                                                                                                                343
```

2

```
Query Match
Best Local Similarity
Matches 1168; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                     The invention relates to an isolated nucleic acid detection reagent capable of detecting 1000 or more genes from Drosophila. The invention useful in developmental biology and in elucidating cell signalling and insecticities, therapeutics and pharmaceutics for the development of discloses genomic DNA sequences (ABL01840-ABL16175) and the encoded proteins (ABB5737-ABB72072).
                                                         The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from at ftp.wipo.int/pub/published_pct_sequences.
                                                     Sequence 3874
                                                                                                                                                                              Claim 1; SEQ ID NO 37252; 21pp + Sequence Listing; English.
                                                                                                                                                                                                                    New isolated nucleic acid
genes from Drosophila and
                                                                                                                                                                                                                                                    WPI; 2001-656860/75.
                                                                                                                                                                                                                interactions
                                                                                                                                                                                                                                                                                            (PEKE ) PE CORP NY
                                                                                                                                                                                                                                                                                                              23-MAR-2000; 2000US-191637P
11-JUL-2000; 2000US-0614150
                                                                                                                                                                                                                                                                                                                                          23-MAR-2001; 2001WO-US09231
                                                                                                                                                                                                                                                                                                                                                                   27-SEP-2001
                                                                                                                                                                                                                                                                                                                                                                                     WO200171042-A2
                                                                                                                                                                                                                                                                                                                                                                                                   Drosophila melanogaster.
                                                                                                                                                                                                                                                                                                                                                                                                                       pharmaceutical; gene; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                          Drosophila: developmental biology: cell signalling;
                                                                                                                                                                                                                                                                                                                                                                                                                                            Drosophila melanogaster genomic polynucleotide SEQ ID NO 37252.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         26-MAR-2002 (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ABL28593 standard; DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ABL28593;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1055
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         944
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AGCATCGTGGCCAGCGTCCTACATCTGGGCAACATCCACTTTGCTGCTGACGACGGACAGC
                                                                                                                                                                                                                                                                           JC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AGCATCGTGGCCAGCGTCCTTCATTTGGCCAACATCCACTTTGCTGCCAACGAGGAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TACCTGGTGAAGGGCCAGTGTGCCAAGGTCTCCTCCATCAACGACAAGAGTGACTGGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GTTATGAGGAAGGCGCTGTCCGTCATTGACTTCACTGAGGATGAAGTGGAGGACTTGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GGGGGCGAGGAGACTCTTCGCAGGCTGGGCTTGGAACGGAACCCCCCAGAGCTATCTG
          Conservative
                                                   вр;
                                                                                                                                                                                                                                                                        Adams M,
                                           1073 A; 982 C; 955 G; 864 T; 0
                  13.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        entry)
                                                                                                                                                                                                                                                                      Li PWD,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3874
                                                                                                                                                                                                            detection reagent for detecting 1000 for elucidating cell signalling and c
          0;
    Score 510.6; DB 23
Pred. No. 4.5e-133;
0; Mismatches 884;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ВР
                                                                                                                                                                                                                                                                    Myers
                                                                                                                                                                                                                                                                    EW
                          DB 23;
    Indels
                      Length 3874;
                                                                                                                                                                                                                                                                                                                                                                                                                          insecticide;
   37;
                                                                                                                                                                                                            0 or more cell-cell
 Gaps
                                                                      WIPO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   943
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1054
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               823
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    995
                                                                                                                                                  is
9;
```

```
δÃ
                                         дb
                                                             Qy
                                                                                      Ъ
                                                                                                          Q
                                                                                                                                   DЬ
                                                                                                                                                      Qγ
                                                                                                                                                                               Ър
                                                                                                                                                                                                 Qy
                                                                                                                                                                                                                           DЬ
                                                                                                                                                                                                                                               Qγ
                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                            ρy
                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                         Qy
                                                                                                                                                                                                                                                                                                                                                                   Ъ
                                                                                                                                                                                                                                                                                                                                                                                       QΥ
                                                                                                                                                                                                                                                                                                                                                                                                             Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                   Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          QУ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     νQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Qy
                                                                                                                                                                             1010
                                                                                                                                                                                                   912
                                                                                                                                                                                                                           950
                                                                                                                                                                                                                                                     890 TGGACATACTGACGGAGAAGTCCGACTACAAGGGCACCTGCAATGCCTTCAAGACCCTGG
                                                                                                                                                                                                                                                                                             792
                                                                                                                                                                                                                                                                                                                   839
                                                                                                                                                                                                                                                                                                                                                              719
                                                                                                                                                                                                                                                                                                                                                                                                                                   612
                                                                                                                                                                                                                                                                                                                                                                                                                                                           659
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     599 TCCAGAGCAATGCAATTCTGGAAACCTTCGGCAACGCAAAGACTAACCGCAACGACAACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       438
GAAAGATCAATAGGTCACTGGCCTCTAAGGACGCTGAGAGCCCCAGCTGGCGAAGCACCA
                       AGTĂCGGĂĂAGGĂTGCTCTGGCCĂAGGCCATCTĂCGACCGTCTCTTCĂCCTGGATCATCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               479
                                     378
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        359
                                                                   ACAGGAAGATCATCGCCAAGGGGGAAGAGCTCCTGAGCCCACTGAACCTTGAACAGGCGG
                                                                                                                TGAAATCCACGGCCAAGCTGCTCCAGGTCACCGAAACCGAGCTGTCCACGGCACTGACCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            198
                                                                                                                              TCAAATATCTGACCAGGCTCCTTGGTGTGGAAGGTACAACACTTAGGGAAGCCCTGACCC 1031
                                                                                                                                                            GAÄATGTGGAGTTCCAAACCATTGAGGA---TGAGCTGGTGATCAGCAATAAGCAGCACT
                                                                                                                                                                           GCAACATCCACTTTGCTGCTGACGAGGACAGCAATGCCCAGGTTACTACTGAGAACCAGC
                                                                                                                                                                                                         GCTTCTCCACGGATGAGGTGCAGACCATTTGGCGCACAATTGCCGCTCTTGCATCTGG
                                                                                                                                                                                                                       ACTTCACTGAGGATGAAGTGGAGGACTTGCTCAGCATCGTGGCCAGCGTCCTACATCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               182
                                                                                                                                                                                                                                                                    TCTCCTCCATCAACGACAAGAGTGACTGGAAGGTTATGAGGAAGGCGCTGTCCGTCATTG
                                                                                                                                                                                                                                                                                                  ATGAACTGCAGAAGGAAACGGGCAAGTATCACTACTTGAACCAGGG------CAGCA 889
                                                                                                                                                                                                                                                                                                                 TGGGCTTGGAACGGAACCCCCAGAGCTACTTGTACCTGGTGAAGGGCCAGTGTGCCAAGG
                                                                                                                                                                                                                                                                                                                                               GGAACTTCCATAGTTTCTATCAGCTGCTGCGTGGAGCCAACGACAACGAGCTGCGGCAAT
                                                                                                                                                                                                                                                                                                                                                                                                        GCCACATTCTCAGTTACCTCCTGGAAAAGTCCCGGGTGGTGCACCAAAATCACGGAGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                        CAGCCGGTTTGGAAAGTACATGGATGTGCAGTTTGACTTCAAGGGTGCCCCCGTGGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    78
                                                                                                                                                                                                                                                                                                                                                                                            GCATCATCACCAACTATCTGCTCGAGAAGTCGCGCGTGGTGCAGCAGCAGCCCGGCGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TGCAGAGCAACCCCGTGTTAGAGGCCTTTGGGAATGCCAAGACTCTCCGCAACGATAACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TTGCGGCGGTGACGAATGCCCAGGGTCAGAACGAAATCGAGAGAGTCAAGAACGTTTTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ATGC----AGAGACCTGCCCAGCCCCTGAACGGGGTGGCGCAGTGCGAGACCG-CCTGT 491
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TAATTTCCGGTGAGTCCGGTGCGGGCAAAACGGAGGCCTCCAAGATCATCATGAAGTACA 538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TCGCCATTGCCGATTCCGCCTACAGGGTGCTCAAGCAGCGCCAACAAGACACCTGCATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TTGCAGTGGCTGACACTGTATACCGGGCACTTCGTACTGAGCGTCGGGACCAGGCAGTGA 377
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GTCCGGAAACCATTCGCAAATACAAGGGTCGGGGAGCTCTTCGAGAATGCCCCCACATTTGT 418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GCCGGCAGCATATGGAAGGCTAGCGTGGTGTCAGTTTTCTATGAAGTACCACCTCATTTGT 317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATACCTACATCGGTCCTGTCCTAGTCTCTGTCAATCCCTACCGAGACCTACAGATCTACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGTCCATGGAG---AAGTTCATGGATAACCTGAGAAAGCGATTCCAAAACGGATCCATCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TCACCAGTGAGGCTGCCTTCATTGAGAACCTCCGCCGCGGGGTTCCGGGAGAACCTCATTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGGACACCATGGCTATGCAACGGGAAGCTGGAGTGCAGGACTTCGTCCTCCTCGACCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGAGCGCCTTGACTGCCCGAGACCGGGTAGGGGTGCAGGACTTTGTCCTGCTGGAGAATT
                                                                                                                 1126
                                                                                                                                                                                    971
                                                                                                                                                                                                          1009
                                                                                                                                                                                                                                                                             851
                                                                                                                                                                                                                                                                                                                          791
                                                                                                                                                                                                                                                                                                                                                                                                                  671
                                                                                                                                                                                                                                                                                                                                                                                                                                          718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                611
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      658
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           551
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    137
```

isomerase;

```
RESULT 11
AAS40995
                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                    Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Q
                                                                                                                                     В
                                                                                                                                                                    Š
                                                                                                                                                                                                           B
                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
   AC
                                                                                                                                     2201
                                                                                                                                                                                                           2141
                                                                                                                                                                                                                                                2042
                                                                                                                                                                                                                                                                                                                                                              2021
                                                                                                                                                                                                                                                                                                                                                                                                   1922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1802
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1752
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1632
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1572
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1544
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1452
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1247
   AAS40995;
                                        AAS40995 standard; cDNA; 3400 BP.
                                                                                                                                                                                                                                                                                                                          1982
                                                                                                                                                                                                                                                                                                                                                                                                                                    1961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1862
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1692
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1272
                                                                                                                                                     GGACTAAGATCTTCATCCGATTCCCCAAGACCTTATTTGCCACAGAGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCAGCTCAATGAACCCCATCATGGCCCAGTGCTTTGACAAGAGTGAGCTCAGTGACAAGA 1751
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CCCGCATCAACAGGGCAAT--CCTATTCCGTGGCAGCAAGACGCAG-GCGCGATTTAACT
                                                                                                                                                                                                                                                                                                                                                                                                                                TGGTTACTCTGCTGAAGAAGGAACCCTTCTATGTGCGCTGCATCAAGCCCCAATGACCTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACAACTCTAAGGATGCCAACCTGAGCGAGGATGTGGCCCGAAGGAGCACACGGATATCAAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AATCCCTAGACCGAGGGGAGTTCCGCCTTCTGCATTATGCTGGAGAGGTGACCTACAGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATGAAGAGTGCCTGCGTCCTGGGGAGGCCACGGACCTGACCTTTCTGGAGAAGTTGGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CGGTTCTTGGGCTCCTGGACATTTACGGCTTTGAAGTGTTTCAGCATAACAGCTTCGAGC 1271
                                                                                                                                                                                                           GCGATGGTGTCCGTGTGCTGATCGAGGAAAAGAAATTCGCCCAGGACGTTAAGTACGGCC
                                                                                                                                                                                                                                                ATGGTGTGGCCGTGTTGGTCAGACACCTCGGCTACAAGCCAGAAGAGTACAAAATGGGCA
                                                                                                                                                                                                                                                                                                                                                                                TGGAGAATCTGCGCGTGCGCAGAGCTGGCTTTGCCTATCGTCGCAAATATGAGGCTTTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A-----GCGGCCAGGACGGTGGCCACCCAGTTCAAGATGAGCCTCCTGCAGCTCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGACTGGGTTTCTGGATAAAAACAATGACCTCCTCTTCCGGAACCTGAAGGAGACCATGT 1691
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAAATCTGAGCAAGCATCCGCACTACACCAGTCGTCAGCT---GAAGCCCACGGATAAGG 1660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGTTCTGCATCAACTACTGCAATGAGAAGCTGCAGCAGCTCTTCATCGAGCTGACTCTCA 1331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CGGTCATCGGAGTGCTGGATATTTACGGCTTCGAGATCTTCGACAGCAGCAACAGCTTTGAAC
                                                                                                                                   ACACAAAGATCTTTATACGCTCGCCACGCACCCTGTTTGCCCTGGAGCA
                                                                                                                                                                                                                                                                                                                        TGCAGAGGTACAAGTCACTGTGCCCAGAGACATGGCCCATGTGGGCAGGACGGCCCCAGG
                                                                                                                                                                                                                                                                                                                                                           TGGAGAACTTACGTGTCCGTCGAGCCGGATTCGTTCATCGCCAGCGCTATGATAAGTTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TGGAGATCCTGAGGTCTAAGGAGCCTGCCTATATCCGGTGCATCAAGCCAAACGACGCCA 1861
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCAATGGATTCATCGAGAAGAACAAGGATACGCTGTATCAGGACTTTAAGCGCTTGCTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AGCTAAAGCATCGCGAGGATTTCCGTATCACCCACTACGCCGGCGATGTGATCTACAACA 1720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACACTGTCAAGCCCCACCCTCACTTCCTGACGCACAAGCTCGCTGACCAGAAGACCAGGA 1571
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACGAGGCCTGCCTCAGCGTGGGCAAGGTGACGGACGACACACTTCTGGGGGGCCATGGACA 1603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AGTCGGAGCAGGAGGAATACGAGGCTGAGGGCATCGCGTGGGAACCTGTCCAGTACTTCA 1391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AGTTCTGCATCAACTATTGCAACGAGAAATTGCAGCAGTTATTCATAGAACTGGTGCTTA 1423
                                                                                                                                                                                                                                                                                   TGCTGCGCTACAAGATGATCTCGCAGTACACTTGGCCCAATTTCCGTGCGGGAAGCGACC
                                                                                                                                                                      2150
                                                                                                                                   2249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1801
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1631
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1303
                                                                                                                                                                                                                                              2101
                                                                                                                                                                                                                                                                                                                                                                                               1981
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1511
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1363
                                                                                                                                                                                                           2200
                                                                                                                                                                                                                                                                                     2140
                                                                                                                                                                                                                                                                                                                                                           2080
                                                                                                                                                                                                                                                                                                                                                                                                                                    2020
   14 - AUG - 2000
14 - AUG - 2000
18 - AUG - 2000
22 - AUG - 2000
22 - AUG - 2000
23 - AUG - 2000
30 - AUG - 2000
01 - SEP - 2000
01 - SEP - 2000
01 - SEP - 2000
05 - SEP - 2000
06 - SEP - 2000
06 - SEP - 2000
08 - SEP - 2000
09 - SEP - 2000
11 - SEP - 2000
11 - SEP - 2000
11 - SEP - 2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   102-MAR-2000

116-MAR-2000

117-MAR-2000

118-APR-2000

119-MAY-2000

11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human; oxidoreductase enzyme; transferase; hydrolase; lyase; isomerase ligase; hyperproliferative disorder; immunodeficiency disorder; autoimmune disorder; neurological disorder; metabolic disorder; inflammatory disorder; cardiovascular disorder; reproductive disorder; blood-related disorder; infectious disorder; gene therapy; cytostatic; anti arthritic; nephrotropic; anticoagulant; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       17-JAN-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO200155301-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         17-DEC-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    encoding
                 2000US-0186350
2000US-0198123
2000US-0198123
2000US-02194886
2000US-0215135
2000US-0216880
2000US-0217487
2000US-0217487
2000US-0218290
2000US-0218290
2000US-0224518
2000US-0225266
2000US-0225266
2000US-0225266
2000US-0225277
2000US-0225266
2000US-0225271
2000US-0225277
2000US-0225377
2000US-022377
2000US-0231244
2000US-0231244
2000US-0233080
2000US-0233080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2000US-0179065.
2000US-0180628.
2000US-0184664.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2001WO-US01239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    novel human enzyme polypeptide #211
```

```
В
                                                                                                                                                                 Qy
                                                                                                                                                                                                    DЪ
                                                                                                                                                                                                                                QΥ
                                                                                                                                                                                                                                                                   Дb
                                                                                                                                                                                                                                                                                                Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The present invention relates to the isolation of novel human enzyme CC polypeptides (AAU22915-AAU23814), and the cDNA and genomic sequences CC encoding them. The enzyme polypeptides of the invention may comprise the CC isomerases or ligases. The sequences of the invention are useful in the disorders including hyperproliferative disorders (e.g. cancer), CC disorders including hyperproliferative disorders (e.g. cancer), CC (e.g. arthritis), neurological disorders (e.g. Albs) autoimmune disorders (e.g. arthritis), neurological disorders (e.g. Alzheimer's disease), CC (e.g. asthma), cardiovascular disorders (e.g. Alzheimer's disorders (e.g. harthritis) and infectious disorders (e.g. arthrogeness), CC (e.g. asthma), cardiovascular disorders (e.g. althrogeness), CC (e.g. infertility) and infectious disorders (e.g. infertility) and infectious disorders (e.g. Influenza). The CC (e.g. infertility) and infectious disorders (e.g. Influenza), The CC (e.g. infertility) and infectious disorders (e.g. Influenza). The CC ARS40785-AAS41684 represent cDNA sequences encoding for the novel human CC specification, but was obtained in electronic format directly from WIPO CC at ftp.wipo.int/pub/published_pct_sequences.
                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Sim
Matches 1169;
416 ACCAAGAGACTGCTCCAGTTCTATGCAGAGACCTGCCCAGCCCCTGAACGGGGTGGCGCA
                                                                   489
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 3400 BP; 728 A; 1045 C; 1035 G; 591 T; 1
                                                                                                                                  429
                                                                                                                                                                 296
                                                                                                                                                                                                  369
                                                                                                                                                                                                                                  236
                                                                                                                                                                                                                                                                 309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               05-DEC-2000;
05-DEC-2000;
06-DEC-2000;
08-DEC-2000;
08-DEC-2000;
08-DEC-2000;
08-DEC-2000;
08-DEC-2000;
08-DEC-2000;
11-DEC-2000;
11-DEC-2000;
05-JAN-2001;
                                                                                                                                                                                                                                                                                                  176
                                                                                                                                                                                                                                                                                                                                 116 GACTITGTCCTGCTGGAGAATTTCACCAGTGAGGCTGCCTTCATTGAGAACCTCCGGCGG
                                                                                                                                                                                                                                                                                                              252 GACTTTGTGCTTTTGGACCAAGTGACCATGGAG---GACTTCATGAGGAACCTGCAGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Claim 4; SEQ ID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Novel polypeptides and polynucleotides useful for diagnosing, preventing, treating neural, immune system, muscular, reproductive, pulmonary, cardiovascular, renal, proliferative disorders and cance diseases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (HUMA-) HUMAN GENOME SCI INC
                                                CGTTCCAGGGÁCACCTGCATCGTCATCTCAGGGGAGAGTGGGGCAGGGAAGACAGAAGCC
                                                                   TATGAGCGGCCACCCCATCTCTATGCTGTGGCCAACGCCGCCTACAAGGCAATGAAGCAC
                                                                                                                                  TATGAAGTACCACCTCATITGTTTGCAGTGGCTGACACTGTATACCGGGCACTTCGTACT
                                                                                                                                                                               TACCAGGAGCTGCCCCTGTATGGGCCTGAGGCCATCGCCAGGTACCAGGCCCGTGAGCTC
                                                                                                                                                                                                      TACCGAGACCTACAGATCTACAGCCGGCAGCATATGGAACGCTACCGTGGTGTCAGTTTC
                                                                                                                                                                                                                                              AGGTTCGAGAÁGGGCCGCATCTACACCTACATCGGTGAGGTGCTGGTGTCCGTGAACCCCC
                                                                                                                                                                                                                                                                   CGGTTCCGGGAGAACCTCATTTATACCTACATCGGTCCTGTCCTAGTCTAGTCTGTCAATCCC
                                                                                                                                                                                                                                                                                                                                                                                       Similarity 54.7
59; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Barash
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2000US-0251988.

2000US-0256719.

2000US-0251879.

2000US-0251856.

2000US-0251868.

2000US-0251869.

2000US-0251869.

2000US-0251999.

2000US-0251999.

2000US-0254097.

2001US-0259678.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  No 221;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SC,
                                                                                                                                                                                                                                                                                                                                                                                                     13.9%;
54.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1180pp; English.
                                                                                                                                                                                                                                                                                                                                                                                    1;
                                                                                                                                                                                                                                                                                                                                                                             Score 507.4; DB 22; Length 3400;
Pred. No. 3.3e-132;
1; Mismatches 917; Indels 52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MS
                                                                                                                                                                                                                                                                                                                                                                                                                                                 other;
                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       cancerous
                                                                                 415
                                                548
                                                                                                                                                355
                                                                                                                                                                                 428
                                                                                                                                                                                                                  295
                                                                                                                                                                                                                                                368
                                                                                                                                                                                                                                                                               235
                                                                                                                                                                                                                                                                                                              308
                                                                                                                                                                                                                                                                                                                                               175
```

6,

2000US-0246474. 2000US-0246475. 2000US-0246476. 2000US-0246477.

2000US-0246477. 2000US-0246523. 2000US-0246523. 2000US-0246524. 2000US-0246525. 2000US-0246525.

14 - SEP - 2000
14 - SEP - 2000
21 - SEP - 2000
25 - SEP - 2000
25 - SEP - 2000
25 - SEP - 2000
27 - SEP - 2000
29 - SEP - 2000
20 - OCT - 2000
20 - OCT - 2000
21 - OCT - 2000
21 - OCT - 2000
21 - OCT - 2000
22 - OCT - 2000
23 - OCT - 2000
24 - OCT - 2000
25 - OCT - 2000
26 - OCT - 2000
27 - OCT - 2000
28 - OCT - 2000
29 - OCT - 2000
20 - OCT - 2000
20 - OCT - 2000
21 - OCT - 200

2000US-0234998 2000US-0235834 2000US-0235834 2000US-0236327 2000US-0236369 2000US-0236370 2000US-0236370 2000US-0236370 2000US-0236370 2000US-0237037 2000US-0237039 2000US-0237039 2000US-0237039 2000US-0237039 2000US-0237039 2000US-0237039 2000US-0237039 2000US-0237039 2000US-0241786 2000US-0241786 2000US-0241786 2000US-0241786 2000US-0241786 2000US-0241786 2000US-0241786

17-NOV-2000 17-NOV-2000 17-NOV-2000 17-NOV-2000 17-NOV-2000 17-NOV-2000 17-NOV-2000 17-NOV-2000 01-DEC-2000 05-DEC-2000;

17-NOV-2000; 17-NOV-2000; 17-NOV-2000; 17-NOV-2000;

17-NOV-2000; 17-NOV-2000;

2000US-0246527 2000US-0246528 2000US-0246610 2000US-0246611 2000US-0246611 2000US-0249207 2000US-0249207 2000US-0249210 2000US-0249211 2000US-0249211 2000US-0249211 2000US-0249211 2000US-0249211 2000US-0249213 2000US-0249213 2000US-0249213 2000US-0249214 2000US-0249215 2000US-0249216 2000US-0249216 2000US-0249217 2000US-0249244 2000US-0249245 2000US-0249246 2000US-0249246 2000US-0249265 2000US-0249265 2000US-0249299 2000US-0249300 2000US-0249300 2000US-0249300 2000US-0249300 2000US-0249300 2000US-0249300

Qy 밁 δÃ

밁

õ

밁

B

,;

```
1629
                              1460
                                                                                        1400
                                                                                                                      1509
                                                                                                                                                  1340
                                                                                                                                                                                1449
                                                                                                                                                                                                               1280
                                                                                                                                                                                                                                             1389
                                                                                                                                                                                                                                                                         1220
                                                                                                                                                                                                                                                                                                       1329
                                                                                                                                                                                                                                                                                                                                     1160
                                                                                                                                                                                                                                                                                                                                                                   1269
                                                                                                                                                                                                                                                                                                                                                                                                1100
                                                                                                                                                                                                                                                                                                                                                                                                                              1209
                                                                                                                                                                                                                                                                                                                                                                                                                                                          1040
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1089
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1029
                                                            1569
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 938
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             878
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  669
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           969
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              710
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            789
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        650
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    590
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             530
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             609
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         476
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       549
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CAGGAGGAATACGAGGCTGAGGGCATCGCGTGGGGAACCTGTCCAGTACTTCAACAAG
                                                                                                                                                                             TTGCTCAGCATCGTGGCCAGCGTCCTACATCTGGGCAACATCCACTTTGCTGCTGACGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GAGGAGAGACTCTCCGTCGGCTGGGCTTGGAACCGCAACCCCCAGAGCTACTTGTACCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CTCAAGCAGCACGTGGGTGAAAGAACTTCCACGCCTTCTACCAATTGCTGAGAGGCAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GTGCACCAAAATCACGGAGAGCGGAACTTCCACGTCTTTTACCAGCTACTGGAGGGGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAGACTCTCCGCAACGATAACTCCAGCCGGTTTGGAAAGTACATGGATGTGCAGTTTGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GTGCG------GACCGCCTGTTGCAGAGCCAACCCCGTGTTAGAGGCCCTTTTGGGAATGCC
            TGCCTGCGTCCTGGGGAGGCCACGGACCTGACCTTTCTGGAGGAGATTGGAGGACACTGTC
                                                                                                                                                                                                                                                                                                     AACAGTGTCATGGAACCCCGGGGCCGGGATCCTCGGCGTGATGGCAAGGACACAGTCATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GTGGAAGGTACAACA-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GAGGGTGGGCTGCAGAAGGAGGGCCTGGCAGTGGCCGAGGCACTGGTGGACCATGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GACAGCAATGCCCAGGTTACTACTGAGAACCAGCTCAAATATCTGACCAGGCTCCTTGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GTGCATCGCATCCTGGCCATATTGCACCTGGGAAACATCGAGTTTGTGGAGACGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CACCAGGGAGCAGGACTCAACATGACTGTGCACAGTGCCTTGGACAGTGATGAGCAGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GTGAAGGGCCAGTGTGCCAAGGTCT------CCTCCATCAACGACAAGAGTGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GAGGACAAGCAGCTGCATGAACTGCACTTGGAGAGAACCCTGCTGTATACAATTTCACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CGCACCAACCGCAATCACAACTCCAGCCGCTTTGGCAAGTACATGGACATCAACTTTGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GAGAGGGTCAAGGACGTGCTGCTCAAGTCCACCTGTGTGCTGGAGGCCTTTGGCAATGCC
TGCAGCTCTGGCACCATCACTGACCGAATCTTCCTGCAGACCCTGGACACGCACCAC
                                                        ACCATTGTGGATCTGGAGCGGCCCCCACCGTGGCATCCTGGCCGTGCTGGACGAGGCC
                                                                                     ATCATCTGTGACCTGGTAGAGGAGAAGTTCAAGGGCATCATCTCCATCTTGGATGAAGAG
                                                                                                                   CAGGAAGAGTACGAGCGCGAGGGGCATCACCTGGCAGAGCGTTGAGTATTTCAACAACGCC
                                                                                                                                                                                                                                                                                                                                  AATAGGTCACTGGCCTCTAAGGACGCTGAGAGCCCCCAGCTGGCGAAGCACCACGGTTCTT
                                                                                                                                                                                                                                                                                                                                                                                                                          GCCTCGGGAGGCAGGGAACTCATAGAGAAGGGCCACACTGCAGCTGAGGCCAGCTATGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATCATCGCCAAGGGGGAAGAGCTCCTGAGCCCACTGAACCTTGAACAGGCGGCATATGCA 1099
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GCTGAGCTGACGCCACACCCCGGGACCTCGTGCTCCGCTCCCTGCTGGCTCGCACAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AGTAAGCACATCATGCAGTACATCGCTGCTGTCACCAATCCAAGCCAGAGGGCTGAGGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1088
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1028
                                                        1628
                                                                                                                                                                               1508
                                                                                                                                                                                                           1339
                                                                                                                                                                                                                                         1448
                                                                                                                                                                                                                                                                       1279
                                                                                                                                                                                                                                                                                                     1388
                                                                                                                                                                                                                                                                                                                                   1219
                                                                                                                                                                                                                                                                                                                                                                 1328
                                                                                                                                                                                                                                                                                                                                                                                                                            1268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1039
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                908
                            1519
                                                                                                                    1568
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           937
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   968
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  817
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            769
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          848
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     709
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    788
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 649
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               728
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             589
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           899
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         529
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       809
```

Ş Ъ δÃ Вb QΥ 밁 Ωy В Qy Ъ δ DЬ δõ

밁

```
Qy
                                                                                                                                                                                                                Ωy
                                                                                                                                                                                                                                                                           Qy
                                                                                                                                                                                                                                                                                                                                        Qy
                                                                                                                                                                                                                                                                                                                                                                                                    Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ъ
                              Qy
                                                            밁
                                                                                        Qy
                                                                                                                      B
                                                                                                                                                                                    Вþ
                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Qy
   2346
                                                                                                                                                                                      2166
                                                                                                                                                                                                                                                 2106
                                                                                                                                                                                                                                                                                                              2046
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1806
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1640
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1520
                                                                                                                                                                                                                                                                                                           CCCATCATTGTGCTGCTATTGCAGAAGGCATGGCGGGGC
                                                                                                                                                                                                    TACAAGTCACTGTGCCCAGAGACATGGCCCATGTGGGCAGGACGGCCCCAGGATGGTGTG
                                                                                                                                                                                                                                              GTGAGGGTCCGCAGGGCTGCCTTCGCTTCCCCAGCCCTACTCTCGATTCCTGGTCAGG
                                                                                                                                                                                                                                                                                                                                                                                      CTGAGGTCTAAGGAGCCTGCCTATATCCGGTGCATCAAGCCAAACGACGCCAAGCAGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                      GAAGCGGCCAGGACGGTGGCCCAGCTCAAGATGAGCCTCCTGCAGCTCGTGGAGATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TTTCTGGATAAAAACAATGACCTCCTCTTCCGGAACCTGAAGGAGACCATGTGCAGCTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAGCCCCACCCTCACTTCCTGACGCACAAGCTCGCTGACCAGAAGACCAGGAAATCCCCTA
                                CAGAGTCTAGCCACCAAGATCCAGGCGGCCTGGAGGGGC
                                                            CTGTTCATCCGCTCACCCCGGACACTGGTCACACTGGAGCAGAGCCGAGCCCGACCCTCATC
                                                                                ATCTTCATCCGATTCCCCAAGACCTTATTTGCCACAGAGGACTCCCTGGAAGTCCGGCGG
                                                                                                                                                    GCCGTGTTGGTCAGACACCTCGGCTACAAGCCAGAAGAGTACAAAATGGGCAGGACTAAG
                                                                                                                                                                                   TACAAGATGACCTGTGAATACACATGGCCCAACCACCTGCTGGGCTCCGACAAGGCAGCC
                                                                                                                                                                                                                                                                              CTGCGCGTGCGCAGAGCTGGCTTTGCCTATCGTCGCAAATATGAGGCTTTCCTGCAGAGG
                                                                                                                                                                                                                                                                                                                                                                        CTTGCCTCCAAGGAGCCCTTCTACGTCCGCTGCATCAAGCCCAATGAGGACAAGGTAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATGAACCCCATCAT-------GGCCCAGTGCTTTGACAAGAGTGAGCTCAGTGACAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TTCATCGACAAGAACAGAGTTTCCTCTTCCAGGACTTCAAGCGGCTGCTGTACAACAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CGCCATCACCTACACCAGCCGCCAGCTCTGCCCCACAGACAAGACCATGGAGTTT
                                                                                                                         GTGAGCGCTCTCCTGGAGCAGCACGGGGCTGCAGGGGGACGTGGCCTTTGGCCACAGCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                    AAGCGCCCCTGACGGCTGGCACACTCTTCAAGAACTCCATGGTGGCCCCTGGTGGAGAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACGGACCCCACTCTACGGGCCATGTGGCCGGACGGCCAGCAGGACATCACAGAGGTGACC
2384
                              2208
                                                                                                                                                                                                                                                                                                                                         1929
                                                                                                                                                                                                                                                                                                                                                                                                    1869
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1805
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1579
                                                                                                                                                                                                                                                                            1989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1809
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1925
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1865
                                                                                                                                                                                                                                                                                                            2105
                                                                                                                                                                                                                                                                                                                                                                                                                                    1985
                                                            2345
                                                                                                                                                      2109
                                                                                                                                                                                                                                                 2165
                                                                                         2169
                                                                                                                         2285
                                                                                                                                                                                    2225
                                                                                                                                                                                                                   2049
                                                                                                                                                                                                                                                                                                                                                                        2045
```

AAS40998 standard; CDNA; 3332 ВP

AAS40998;

17-DEC-2001 (first entry)

cDNA encoding novel human enzyme polypeptide #214.

autoimmune disorder; neurological disorder; metabolic disorder; inflammatory disorder; cardiovascular disorder; reproductive disorder; blood-related disorder; infectious disorder; gene therapy; cytostatic; anti arthritic; nephrotropic; anticoagulant: se Human; oxidoreductase enzyme; transferase; hydrolase; ligase; hyperproliferative disorder; immunodeficiency

Вb

δÃ

Qy 밁 Q

밁

ì

рь õ οy В δÃ Вb δ В δÃ

DЪ

WO200155301-A2

02-AUG-2001

1688

2001WO-US01239.

ς, γ	1-) HUMAN GENOWE	SOTOS-	N-2001: 2000US-	EC-2000; 2000us-	EC-2000; 2000US	EC-2000; 2000US	EC-2000; 2000US	EC-2000; 2000US	SEC - 2000; 2000US	EC-2000; 2000US	DEC-2000: 200005	DEC-2000; 2000ms	DEC-2000; 2000US	DEC-2000; 2000US	DEC 2000; 2000US	NOV-2000; 20000;	NOV 2000; 20000;	NOV 2000; 2000U,	NOV-2000; 2000U	NOV-2000, 20000	NOV-2000: 2000	NOV-2000: 2000:	-NOV-2000: 2000	-NOV-2000; 2000	-NOV-2000; 2000	-NOV-2000; 20001	2000; 2000	- NOV 2000; 2000	-NOV-2000, 2000	-NOV-2000	-NOV-2000: 2000	'-NOV-2000; 2000	7-NOV-2000; 2000	, NOV-2000; 2000	7-NOV-2000, 2000	7-NOV-2000: 2000	7-NOV-2000: 2000	8-NOV-2000; 2000	8-NOV-2000; 2000	8 NOV-2000; 200	NOV-2000; 200	8-NOV-2000; 200)8-NOV-2000; 200)8-NOV-2000; 200	08-NOV-2000, 200	08-NOV-2000, 200	08-NOV-2000. 200	08-NOV-2000: 200	08-NOV-2000: 200	08-NOV-2000: 20	08-NOV-2000; 20	08-NOV-2000; 20	06-NOV-2000; 20	08 NOV-2000; 20	08 - NOV - 2000; 20	01-WOL 2000; 20	20-001-2000; 20	20-0CT-2000; 20	20-OCT-2000: 20	20-OCT-2000; 20	20-OCT-2000; 20	20-001-2000; 2	20-001-2000; 2	20-0CT-2000; 2	20-OCT-2000, 2	13-OCT-2000: 2	13-OCT-2000; 2	13 OCT -2000; 2	03-001-2000; 2	02-00-3000	02-OCT-2000;	02-OCT-2000.		02-UCT-2000;	PR 02-0CT-2000; 2000US-0236370.
---------	------------------	--------	-----------------	------------------	-----------------	-----------------	-----------------	-----------------	--------------------	-----------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	-----------------	-----------------	----------------	-----------------	-----------------	-----------------	-----------------	------------------	------------	------------------	-----------------	-----------	-----------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	-----------------	---------------	-----------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	-----------------	-----------------	-----------------	-----------------	-----------------	---------------------	-----------------	-----------------	-----------------	-----------------	-----------------	-----------------	----------------	----------------	----------------	----------------	----------------	----------------	-----------------	----------------	------------	--------------	--------------	--	--------------	---------------------------------

12

.

31 JAN-2000; 2
24-FEB-2000; 2
24-FEB-2000; 2
26-MAR-2000; 2
18-MAR-2000; 2
28-MAR-2000; 2
28-MAR-2000; 2
28-JUN-2000; 2
29-JUL-2000; 2
21-JUL-2000; 2
21-JUL

); 2000US-0179065
); 2000US-0184664
); 2000US-0184664
); 2000US-0184664
); 2000US-0199076
); 2000US-0219076
); 2000US-021637
); 2000US-021637
); 2000US-0216380
); 2000US-0217487
); 2000US-0217487
); 2000US-0224518
); 2000US-0224518
); 2000US-0224518
); 2000US-0224518
); 2000US-0225268
); 2000US-0225268
); 2000US-0225274
); 2000US-0225274
); 2000US-0225274
); 2000US-0225277
); 2000US-0225277
); 2000US-0225277
); 2000US-0225477
); 2000US-0235474
); 2000US-0235487
); 2000US-0233063
); 2000US-0233063
); 2000US-0233063
); 2000US-0233484
); 2000US-0233483
); 2000US-0233484
); 2000US-0233484
); 2000US-0233483
); 2000US-0233483
); 2000US-0233484
); 2000US-0233483
); 2000US-0233483
); 2000US-0233483
); 2000US-0233484
); 2000US-0233483
); 2000US-0233484
); 2000US-0233483
); 2000US-0233484
); 2000US-0233483
); 2000US-0233483
); 2000US-0233483
); 2000US-0233483
); 2000US-0233483
); 2000US-0233483
); 2000US-0233484
); 2000US-0233483
); 2000US-0233

٠.

```
Query Match
Best Local Similarity
Matches 1169; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (e.g. asthma), cardiovascular disorders (e.g. atherosclerosis), blood-related disorders (e.g. haemophilla), reproductive disorders (e.g. infertility) and infectious disorders (e.g. Influenza). The polynucleotides of the invention can also be used in gene therapy. AAS40785-AAS41684 represent cDNA sequences encoding for the novel human enzyme polypeptides of the invention.

Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The present invention relates to the isolation of novel human enzyme polypeptides (AAU22915-AAU23814), and the CDNA and genomic sequences encoding them. The enzyme polypeptides of the invention may comprise the functional classes of oxidoreductases, transferases, hydrolases, lyases, isomerases or ligases. The sequences of the invention are useful in the diagnosis, treatment, prevention and/or prognosis of a wide range of disorders including hyperproliferative disorders (e.g. cancer), immunodeficiency disorders (e.g. AIDS) autoimmune disorders (e.g. arthritis), neurological disorders (e.g. Alzheimer's disease), metabolic disorders (e.g. phenylketonuria), inflammatory disorders
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 3332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Claim 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Novel polypeptides and polynucleotides useful for diagnosing, preventing, treating neural, immune system, muscular, reproductive, pulmonary, cardiovascular, renal, proliferative disorders and cance
                                                                                                                                                                                                                                                                   530
                                                                                                                                                                                                                                                                                                                                                                                                                                   492
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      416
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          296
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ftp.wipo.int/pub/published_pct_sequences.
                                                                                                                                                                                                        GACTITGTCCTGCTGGAGAATTTCACCAGTGAGGCTGCCTTCATTGAGAACCTCCGGCGG 175
                                                                                               GAGCGTCGGGACCAGGCAGTGATGATTTCTGGAGAGAGTGGGGCCAGGCAAGAACAGAGGCC 415
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TATGAAGTACCACCTCATTTGTTTGCAGTGGCTGACACTGTATACCGGGCACTTCGTACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TACCGAGACCTACAGATCTACAGCCGGCAGCATATGGAACGCTACCGTGGTGTCAGTTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CGGTTCCGGGAGAACCTCATTTATACCTACATCGGTCCTGTCCTAGTCTCTGTCAATCCC
CTCAAGCAGCACGTGGGTGAAAGAAACTTCCACGCCTTCTACCAATTGCTGAGAGGCAGT
                                             GTGCACCAAAATCACGGAGAGCGGAACTTCCACGTCTTTTACCAGCTACTGGAGGGGGGC
                                                                                                                                                                                                                                                                                                                                                                           GTGCG------AGACCGCCTGTTGCAGAGCAACCCCGTGTTAGAGGCCTTTGGGAATGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACCAAGAGACTGCTCCAGTTCTATGCAGAGACCTGCCCAGCCCCTGAACGGGGTGGCGCA 475
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TACCAGGAGCTGCCCCTGTATGGGCCTGAGGCCATCGCCAGGTACCAGGGCCGTGAGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AGGTTCGAGAAGGGCCGCATCTACACCTACATCGGTGAGGTGCTGGTGTCCGTGAACCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GACTTTGTGCTTTTGGACCAAGTGACCATGGAG----GACTTCATGAGGAACCTGCAGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                 AGTAAGCACATCATGCAGTACATCGCTGCTGTCACCAATCCAAGCCAGAGGGCTGAGGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TATGAGCGGCCACCCCATCTCTATGCTGTGGCCAACGCCGCCTACAAGGCAATGAAGCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQ ID NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                712 A; 1029 C; 1014 G; 577 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        224; 1180pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            13.8%;
54.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 506.2;
Pred. No. 7.2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            .2e-132;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        918;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            cancerous
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                        649
                                                                                                                                                                                                             671
                                                                                                                                                                                                                                                                589
                                                                                                                                                                                                                                                                                                                        611
                                                                                                                                                                                                                                                                                                                                                                           529
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            491
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        6,
```

Š

B 64

В

δÃ

Ş

55 B 55

밁

5 B 5

B

1809	750 GAAGCGGCCAGGACGGTGGCCACCCAGTTCAAGATGAGCCTCCTGCAGCTCGTGGAGATC	Ωу 1
1868	809 ACGGACCCCACTCTACGGGCCATGTGGCCGGACGGGCAGCAGGACATCACAGAGGTGACC	Db 1:
1749	CCCATCATGGCCCAGTGCTTTGACAAGAGTGAGCTC	Qy 1
1808	749 TTCATCGACAAGAACAGAGATTTCCTCTTCCAGGACTTCAAGCGGCTGCTGTACAACAGC	Db 1
1699	TTCTGGATAAAAACAATGACCTCCTCTTCCGGAACCTGAAGGAGACCATGTGC	Qy 1
1748	580 GACCGAGGGGAGTICCGCCTTCTGCATTATGCTGGGAGGGTGACCTACAGTGTGACTGGG	Db 1
69	32 GCCATCACCTACACTACACCAGCCGCCAGCTCTGCCCCACAGACAAG	
1579	20 AAGCCCCACCCTCACTTCCTGACGCACAAGCTCGCTGACCAGAAAGACCAGGAAATCCCT	_
1631		_
1519	60	Qy 14
57	<u>ن</u>	· ·
. 4	OO ATCATCTGTGACCTGGTAGAGGAAGTTCAAGGCATCATCTTCCATCTTGGATGAAGAG	ا د
1511	340 CAGGAGGAATAGGAGGCTGAGGGCATCGGGTGGGAACCTGTCGAGTACTTCAACAACAAG 	рь Су 1.
4.5	92 ATCAACTACTGCAACGAGAAGCTGCAGCAGCTATTCATCCAGCTCATCCTGAAGCAGGAA	۔ سر د
w	280 ATCAACTACTGCAATGAGAAGCTGCAGCAGCTCTTCATCGAGCTGACTCTCAAGTCGGAG	
1391	332 GGCGTGCTGGACATCTATGGCTTCGAGGTGTTTCCCGGTCAACAGTTTCGAGCAGTTCTGC	Db 1:
1279	220 GGGCTCCTGGACATTTACGGCTTTGAAGTGTTTCAGCATAACAGCTTCGAGCAGTTCTGC	0y 1:
1331		<u>ب</u>
1219	160 AATAGGTCACTGGCCTCTAAGGACGCTGAGAGCCCCAGCTGGCGAAGCACCACGGTTCTT	Qy 1:
1271		
1159	1100 AGGGATGCGCTTGCCAAGGCTGTGTACAGCCGGACATTCACCTGGCTGG	Ωу 1:
1211	52	
1099	040 ATCATCGCCAAGGGGGAAGAGCTCCTGAGCCCACTGAACCTTGAACAGGCGGCATATGCA	Qy 11
1151	092 GCTGAGCTGACGCCACACCCCGGGACCTCGTGCTCCCTGCTCCCTGCTGCTCGCACAGTT	<u> </u>
1039	998 GTGGAAGGTACAACACTTAGGGAAGCCCTGACCCACAGGAAG	Qy
1091		_
997	ACAGCAATGCCCAGGTTACTACTGAGAACCAGCTCAAATATCTGACCAGGCTCCTTGGT	Qy .
1031	972 GTGCATCGCATCCTGGCTGCCATATTGCACCTGGGAAACATCGAGTTTGTGGAGACGAG	Db :
937	GAG	Qy
971	912 CACCAGGCAGTGACCGAGGCCATGAGGGTCATCGGCTTCAGTCCTGAAGAGGTGGAGTCT	Db
877	PATGAGGAAGGCGCTGTCCGTCATTGACTTCACTGAGGATGAAGTGGAGGAC	Qy
911	CTGTGCACAGTGCCTTGGACAGTGATGAGCAGAGC	
817		Qy
851	10 Mandamandam Interface 10 Mandamandam Celebrate 14 1 1 1 1 1 1 1 1	Db 4
ע	ひようしゃようよんご そじじょうしょ そうじしゃ そうじゅんしじじじゅんじじ しょうしゅん はっちょう そうじゅう そうじゅう しょうしゃ しゅうしゃ とうじゅうしゅう とうじゅうしゅう かっかい かっかい かんかい かんかい かんかい かんかい しゅうしゅう しゅう) ,

.

```
RESULT 13
ABK52205
XX ABK52
XX BAK52
XX BAK52
XX Homo

                    Novel probe for use in assay identifying and/or isolating
                                                                              WPI; 2002-434908/46.
P-PSDB; AAU97544.
                                                                                                                                   Thuring
                                                                                                                                                    Stephens L,
                                                                                                                                                                                      (LIMZ/) LIM
                                                                                                                                                                                                                                                         23-AUG-2000;
15-DEC-2000;
                                                                                                                                                                                                                                                                                                     23-AUG-2001; 2001WO-GB03791
                                                                                                                                                                                            (BABR-) BABRAHAM INST.
(UYCA-) UNIV CAMBRIDGE TECH SERVICES
                                                                                                                                                                                                                                                                                                                                                07-MAR-2002
                                                                                                                                                                                                                                                                                                                                                                                 WO200218946-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human; phosphoinositide-binding protein; phosphatidyl acid; gene; phosphatidic acid; signal transduction; housekeeping; myosin-lF; 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DNA encoding human Myosin-1F protein MYO1F.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   13-AUG-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ABK52205 standard; DNA; 3617 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ABK52205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2050
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1990 TACAAGTCACTGTGCCCAGAGACATGGCCCATGTGGGCAGGACGGCCCCAGGATGGTGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1930 CTGCGCGTGCGCAGAGCTGGCCTTTGCCTATCGTCGCAAATATGAGGCTTTCCTGCAGAGG 1989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1870
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1929
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1869
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CAGACTCTAGCCACCAAGATCCAGGCGGCCTGGAGGGGC 2208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCCATCATTGTGCTGCTATTGCAGAAGGCATGGCGGGGC 2327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATCTTCATCCGATTACCCCAAGACCTTATTTGCCACAGAGGACTCCCTGGAAGTCCGGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GTGAGCCCTCTCCTGGAGCAGCACGGGCTGCAGGGGGACGTGGCCTTTTGCCCACAGCAAG
                                                                                                                                   JWJF;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GCCGTGTTGGTCAGACACCTCGGCTACAAGCCAGAAGAGTACAAAATGGGCAGGACTAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TACAAGATGACCTGTGAATACACATGGCCCAACCACCTGCTGGGCTCCGACAAGGCAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GTGAGGGTCCGCAGGGCTGGCTTCGCTTCCCGCCAGCCCTACTCTCGATTCCTGCTCAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GGTCGCTTTGATGAGGTGCTCATCCGACATCAGGTGAAGTACCTGGGACTGATGGAGAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGGAAGCTGGATGAGAACCACTGTCGCCACCAGGTCGCATACCTGGGGCTGCTGGAGAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTTGCCTCCAAGGAGCCCTTCTACGTCCGCTGCATCAAGCCCAATGAGGACAAGGTAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CTGAGGTCTAAGGAGCCTGCCTATATCCGGTGCATCAAGCCAAACGACGACGCCAAGCAGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Z
                                                                                                                                                Hawkins
                                                                                                                                                                                                                                                 2000GB-0020833.
2000GB-0030637.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
                                                                                                                                                                                                                                                                                                                                                                                       /*tag- a
/product- "Human myosin-1F protein MYO1F"
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers
41..3337
                                                                                                                                                PΤ,
                                                                                                                                          Holmes
                 / method for 
J PA- and/or
                                                                                                                                         AB,
                                                                                                                                                                                              CTD
                                                                                                                                       Manifava
   detecting, measuring, PIPn-binding protein in a
                                                                                                                                     ĭ
                                                                                                                                 Ktistakis
                                                                                                                                 z
       test
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2049
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2048
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1928
Д
                              ρ
                                                                  В
                                                                                                 δÃ
                                                                                                                                       B
                                                                                                                                                                     Qy
                                                                                                                                                                                                           Db
                                                                                                                                                                                                                                          Q
                                                                                                                                                                                                                                                                              ДЬ
                                                                                                                                                                                                                                                                                                                QΥ
                                                                                                                                                                                                                                                                                                                                                    Ъ
                                                                                                                                                                                                                                                                                                                                                                                   Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                         рЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              £xxx6555555555555555555555555555555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity
                                                                                                                                                                       560
                                                                                                                                                                                                                                          500
                                                                                                                                                                                                                                                                              422
                                                                                                                                                                                                                                                                                                                440
                                                                                                                                                                                                                                                                                                                                                                                                                         302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  200
```

DЬ Ş 밁 Ş B Š 밁 õ В ş ф ş В Š 밁

```
The present invention relates to a new probe comprising or consisting of CC an immobilised phosphatidy acid derivative attached on to a solid CC support, or a phosphatidic acid (PA) functionalised solid support. The consisting of probe of the invention is useful in an assay method for identifying and/or isolating a protein that binds to the probe. The invention is also cone type of phosphatidic acid and/or phosphatidor isolating more than CC (PIPn) from a test sample e.g. a tissue of tissue culture extract. The CC assay is also useful for detecting, measuring, identifying and/or isolating protein CC assay is also useful for detecting, measuring, identifying and/or phosphoinositide binding protein CC at the stample, to detect and/or measure the ability of an agent, applied test sample, to detect and/or measure the ability of an agent, applied test sample, to agonise or antagonise protein-probe binding protein-containing CC detect and/or measure the ability of an agent, applied to the probe, to consphoinositide binding protein-probe binding. The probe is useful for cc identifying an agonist or antagonist or antagonist of phosphatidic acid, phosphoinositide binding protein-probe binding. The probe is useful for identifying and diagnosit and/or antagonist. The invention is also useful for identifying for probe is useful as an important research tool in fundamental research cc encodes the human myosin-IF protein MYOIF of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   sample, has immobilised phosphatidyl acid attached to solid support
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Page 133-134; 163pp; English.
```

3617 BP; 809 A; 1103 C; 1073 G; 631 T; 1 other;

Matches 1149; 662 CACATCTACCTACCAGCTGCTGGAAGGGGCCTCCCAGGAGCAAAGGCAGAACCTGGGCCTC 602 TCCAACTTCTTGCTGGAGAAGTCCCGCGTGGTCATGCAAAATGAAAATGAGAGGAACTTC 482 AACCCGCTGCTCGAGGCCTTCGGCAACGCCAAGACTGTGCGCAACAACAATTCCAGCCGC 260 CGGCAGCATATGGAACGCTACCGTGGTGTCAGTTTCTATGAAGTACCACCTCATTTGTTT 182 ACCTACATCGGCTCTGTGCTCATCTCTGTAAACCCCCTTCAAGCAGATGCCCCTACTTCACC 140 ACCAGTGAGGCTGCCTTCATTGAGAACCTCCGGCGGCGGTTCCGGGAGAACCTCATTTAT 199 CTCAGTTACCTCCTGGAAAAGTCCCGGGTGGTGCACCAAAATCACGGAGGGGGAGCTTC TTTGGAAAGTACATGGATGTGCAGTTTGACTTCAAGGGTGCCCCCGTGGGAAGCCACATT TTTGGCAAGTACTTTGAGATCCAGTTCAGCCGAGGTGGGGAGCCAGATGGGGGCCAAGATC AACCCCGTGTTAGAGGCCTTTGGGAATGCCAAGACTCTCCGCAACGATAACTCCAGCCGG 559 TCCAAGGTGTCTGGCGGAGGCGAGAAGGTCCAGCACGTCAAAGATATCATCCTGCAGTCC GCAGAGACCTGCCCAGCCCCTGAACGGGGTGGCGCAGTGCGAGACCGCCTGTTGCAGAGC 499 GCCCTCACGGACAACATGTACCGGAACATGCTTATCGACTGTGAGAACCAGTGTGTCATC GCAGTGGCTGACACTGTATACCGGGCACTTCGTACTGAGCGTCGGGACCAGGCAGTGATG GACCGTGAGATCGACCTCTATCAGGGCGCGCGCCCAGTATGAGAATCCTCCGCACATCTAC ACCTACATCGGTCCTGTCCTAGTCTCTGTCAATCCCTACCGAGACCTACAGATCTACAGC Conservative 12.68; 0; Mismatches Score 460.8; DB 24; Pred. No. 5e-119; 857; Indels Length 3617; 94; Gaps 661 679 601 481 421 361 379 301 259 241 8

```
1733
                                                                                                                                                                                                                                                                                                                                                                                                                                                     1530
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1475
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1415
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1148
1679
                                                                                                                                               1619
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1553
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1388
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1076
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1088
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1016
                                                                                                                                                                                                                                                                                                  1559
                                                                                                                                                                                                                                                                                                                                                                       1613
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1040
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              980
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         956
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        899
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 920
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       839
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      779
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         722
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   740
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AACCTGAAGGAGACCATGTGCAGCTCAATGAACCCCATCATGGCCCAGTGCTTTGACAAG
                                                                                                                                                                                                                                                                                          GCAAGGTCTCCTACGACGTCAGCGGCTTCTGCGAGAGGGAACCGAGACGTTCTCTTCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TTTCTGGAGAAGTTGGAGGACACTGTCAAGCCCCACCCTCACTTCCTGACGCACAAGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TTCAACAACAAGATCATCTGTGACCTGGTAGAGGAGGAGATTCAA------GGGCATCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTCAAGTCGGAGCAGGAGGAATACGAGGCTGAGGGCATCGCGTGGGAACCTGTCCAGTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            THE THILL IN THE STREAM OF THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GCGGCATATGCAAGGGATGCGCTTGCCAAGGCTGTGTACAGCCGGACATTCACCTGGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CTGACCAGGCTCCTTGGTGTGGAAGGTACAACACTTAGGGAAGCCCTGACCCACAGGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CACTTTGCTGACGACGACAGCAATGCCCAGGTTACTGAGAACCAGCTCAAATAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CCCAGCATCCAGCTGGTCCTGCAGCTCGTGGGGATCTTGCACCTGGGGAACATC
AAGCTGGATGGAGACAAGAAGGGGCGCCCCAGCCCCGCCGCCTCCAAGATCAAGAAACAA
                                  AGTGAGCTCAGTGACAAGAAGCGG----CCAGGACGGTGGCCAACCCAGTTCAAGATGAGC
                                                                                                                                       GACCTCATAGAGCTGATGCAGACCAGTGAGCAGGCCTTCCTCCGGGATGCTCTTCCCCGAG
                                                                                                                                                                                                                                                                                                                                                                GGAGAGGTGACCTACAGTGTGACTGGGTTTCTGGATAAAAACAATGACCTCCTCTTCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GCTGACCAGAAGACCAGGAAATCCCCTAGACCGAGGGGAGTTCCGCCTTCTGCATTATGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CTGCTGCAGAAGCTGCAGGCGGCTGTGGGGACCCACGAGCATTTCAACAGCTGGA----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TCCATCTTGGATGAAGAGTGC-----CTGCGTCCTGGGGAGGCCACGGACCTGACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TTCAACAACAAGGTCGTCTGTGACCTCATCGAAAACAAGCTGAGCCCCCCAGGCATCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CTGAAGGCCGAGCAGGAGGAGTATGTGCAGGAAGGCATTCGCTGGACTCCAATCCAGTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ------GGTGTGCTGGACATTTACGGCTTCGAGATCTTCCAGAAAAATGGCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACCACGGTTCTTGGGCTCCTGGACATTTACGGCTTTGAAGTGTTTCAGCATAACAGCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GTCAGAAAGATCAATAGGTCACTGGCCTCTAAGGACGCTGAGAGCCCCCAGCTGGCGAAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GCAGCCTACACCCGTGATGCCCTGGCCAAGGGGGCTCTATGCCCGCCTCTTCGACTTCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATGGACAGCCGCTGGGGCCGCGCGAGCCATCATCTGACCCTCAACGTGGAGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATCATCGCCAAGGGGGAAGAGC -----TCCTGAGCCCACTGAACCTTGAACAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CCCGCCTACCTGCTGGGCATTGACAGCGGGGGGGCGACTGCAGGAGAAGCTGACCAGCCGCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AGTTTCTGTGAAGACGGG----AATTACGCCCGAGTGGAGAGTGTGGACCTCCTGGCCTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GAGGATGAAGTGGAGGACTTGCTCAGCATCGTGGCCAGCGTCCTACATCTGGGCAACATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACGGACGACAGAAGCGACTTTGGTGAGACTCTGAGTGCTATGCAGGTTATTGGGATCCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATCAACGACAAGAGTGACTGGAAGGTTATGAGGAAGGCGCTGTCCGTCATTGACTTCACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GAACGGAACCCCCAGAGCTACTTGTACCTGGTGAAGGGCCAGTGTGCCAAGGTCTCCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      -GACACCGGACTACTATTACTACCTCAACCAATCGGACACCTACCAGGTGGACGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                     -GCGCCGGCTTCGTCATCCACCACTACGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1207
                                                                                                                                                                                                                    1732
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1612
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1474
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1492
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1087
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1015
                                                                                                                                                                                                                                                                                              1618
                                                                                                                                                                                                                                                                                                                                                                    1672
                                                                                                                                                                                                                                                                                                                                                                                                                                                 1558
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1529
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1075
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1039
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                955
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              979
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       898
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             919
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      838
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                859
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         778
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   799
```

δõ 멍 δÃ Вþ δõ В Qy В δÃ

δÃ 멍 δ ₽

망

Qy

B Ş g δÃ В Q В δÃ

B οy ₽ ρ В γQ B

В Ş Ъ δ

밁 δõ

and

```
Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 14
AAF32774/c
ID AAF32774 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ρy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δÃ
      δÃ
The invention relates to the isolation of genes AAF32757-F32803 47 human secreted profesins AAB64349-B864594. The genes can be use generate fusion proteins by linking to the gene for the human immunoglobulin G Fc portion (SEQID1) for increasing the stabilit the fusion protein as compared to the human protein only. The gene for the fusion protein as compared to the human protein only.
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Cytostatic; immunosuppressive; nootropic; neuroprotective; antiviral; antiallergic; hepatotropic; antidiabetic; antiinflammatory; antiulcer; vulnerary; anticonvulsant; antibacterial; antifungal; antiparastic; cardiant; gene therapy; cancer; immune disorder; cardiovascular disorder; neurological disease; infection; human; secreted protein; ss.
                                                                                                                                                                                                                                                    (HUMA-)
(ROSE/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2099
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1979
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1919
                                                                                               Claim
                                                                                                                           Isolated nucleic acid molecule encoding a human secreted protein used in preventing, treating or ameliorating a medical condition
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human
                                                                                                                                                                                                                                                                                                     11-JUN-1999;
                                                                                                                                                                                                                                                                                                                                  01-JUN-2000; 2000WO-US14934
                                                                                                                                                                                                                                                                                                                                                                 21-DEC-2000
                                                                                                                                                                                                                                                                                                                                                                                              WO200077197-A1
                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     22-MAR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAF32774;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TACAAAATGGGCAGGACTAAGATCTTCATCCGATTCCCCAAGACCTTATTTGCCACAGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TACCTGGGACTGATGGAGAATCTGCGCGTGCGCAGAGCTGGCTTTGCCTATCGTCGCAAA 1968
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CCAAACGACGCCAAGCAGCCGGGTCGCTTTGATGAGGTGCTCATCCGACATCAGGTGAAG
                                                                                                                                                                                          2001-032312/04.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GAGGTGCGAGAGCGAAAGTTCGATGGCTTTGCCCGAACCATCCAGAAGGCCTGGCGGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GACTCCCTGGAAGTCCGGCGGCAGAGTCTAGCCACCAAGATCCAGGCGGCCTGGAGGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TACCAGATGGGGAGCACCAAGGTCTTTGTCAAGAACCCAGAGTCGCTTTTCCTCCTGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TTCGCCAAATTCCTGCAGAGGTATGCCATTCTGACCCCCGAGACGTGGCCGCGGTGGCGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TATGAGGCTTTCCTGCAGAGGTACAAGTCACTGTGCCCAGAGACATGGCCCCATGTGGGCA 2028
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TACCTGGGCCTGAAGGAACATCAGGGTGCGCAGAGCCGGCTTCGCCTACCGCCGCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CCCAACGAGACCAAGCACGCCCGAGACTGGGAGGAGAACAGAGTCAAGCACCAGGTGGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GCCAACGACCTGGTGGCCACACTGATGAGGTGCACACCCCACTACATCCGCTGCATCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GGGGACGAACGCCAGGGCGTCCAGCACCTGCTTCGGGCGGTCAACATGGAGCCCGACCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGACGGCCCCAGGATGGTGGCCCGTGTTGGTCAGACACCTCGGCTACAAGCCAGAAGAG
                                                                                                                                                                                                                         CA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      secreted
                                                                                                                                                                                                                                                      HUMAN GENOME ROSEN C A.
                                                                                                                                                                           AAB64566
                                                                                             Page 457;
                                                                                                                                                                                                                         Ruben SM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    protein
                                                                                                                                                                                                                                                                                                     99US-0138599.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   entry)
                                                                                                                                                                                                                                                                      SCI
                                                                                                                                                                                                                         Komatsoulis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2263
                                                                                             English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      #18.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ВP
 the human
the stability of
only. The genes
                                             F32803 encoding be used to
                                                                                                                                 is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1848
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1978
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1918
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2098
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2038
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2088
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2148
```

```
В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ъ
1299 TCATGAAGCTGAGTCTGTCTTGGCGGGTGGTGGCAGCAGTGTTGAAACTGGGGAACATTGA 1240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            888888888888888888888888888888888888
                                                                                            1359
                  862 GGATGAAGTGGAGGACTTGCTCAGCATCGTGGCCAGCGTCCTACATCTGGGCAACATCCA 921
                                                                                                                   1416 GAGGGATTTCAGCAGGTATAACTACCTGAGTCTGG---ATTCGGCCAAAGTGAATGGAGT 1360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CC conditions, e.g. by protein or gene therapy. The genes are isolated CC from a range of human tissues disclosed in the specification. The GC nucleic acids, proteins, antibodies and (ant)agonists are isolated CC the diagnosis, treatment and prevention of: (a) cancer, e.g. breast CC marrow, breast, gastrointestinal tract, liver, lung, or urogenital; (b) immune disorders e.g. Addison's disease, allergies, autoimmune CC disease, multiple sclerosis, rheumatoid arthritis and ulcerative CC colitis; (c) cardiovascular disorders such as myocardial ischaemias; (d) cer pliepsy; and (f) infectious diseases e.g. cerebral anoxia and xxx
                                                                                                                                                                            1476 TGTGTTGTATCAGCTGCTCTGGTGCCTCTGAAGAGCTCCTCAATAAACTTAAGCTTGA 1417
                                                                               802 CAACGACAAGAGTGACTGGAAGGTTATGAGGAAGGCGCTGTCCGTCATTGACTTCACTGA 861
                                                                                                                                       742 ACGGAACCCCCAGAGCTACTTGTACCTGGTGAAGGGCCAGTGTGCCAAGGTCTCCTCCAT 801
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity 12.3%; Score 450.6; DB 22; Length 2263;
Bast Local Similarity 53.4%; Pred. No. 2.9e-116;
Matches 1083; Conservative 0; Mismatches 909; Indels 37; Gaps
                                                                                                                                                                                                                                        1596
                                                                                                                                                                                                1656
                                                                                                                                                                                                                                                          622 CAGTTACCTCCTGGAAAAGTCCCCGGGTGGTGCACCAAAATCACGGAGGCGGAACTTCCA 681
                                                                                                                                                                                                                                                                                                                                                                                                                                                       1716
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1836 CCTTTCGGATGAAGCATACAGATCCCTACGAGATCAAGATAAGGACCAATGTATTCTCAT 1777
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1896 AGAGAAAGTGGAAGAATACAGGAACAGAAATTTTTTATGAACTGAGCCCTCACATCTTTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            322 AGTGGCTGACACTGTATACCGGGCACTTCGTACTGAGCGTCGGGACCAGGCAGTGATGAT 381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1956 TTACATTGGAAGTGTGGTTATATCTGTTTAACCCATATCGGTCTTTACCCATTTATTCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GGATGATGCAGCAAATTTTÄGAACCGTGCGGAATGCCATGCAGATTGTGGGCTTTÄTGGA 1300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             202 CTACATGGGTCCTGTCCTAGTCTGTCAATCCCTACGGAGACCTACAGATCTACAGCCG 261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 2263 BP; 563 A; 529 C; 459 G; 712 T; 0 other;
                                                                                                                                                                                                                                                                                                TGCCAAATATATGGATATTGAATTTGACTTTAAAGGCGATCCACTAGGAGGAGTAATAAG 1537
                                                                                                                                                                                                                                                                                                                   TGGAAAGTACATGGATGTGCAGTTTGACTTCAAGGGTGCCCCCGTGGGAGGCCACATTCT 621
                                                                                                                                                                                                                                                                                                                                                           CCCGGTCCTGGAAGCTTTTGGAAATGCCAAAACTGTAAGGAATGACAACTCCTCTAGATT 1597
                                                                                                                                                                                                                                                                                                                                                                                CCCCGTGTTAGAGGCCTTTGGGAATGCCAAGACTCTCCGCAACGATAACTCCAGCCGGTT 561
                                                                                                                                                                                                                                                                                                                                                                                                                                                 AGAGACCTGCCCAGCCCCTGAACGGGGTGGCGCAGTGCGAGACCGGCTGTTGCAGAGCAA 501
                                                                                                                                                                                                                                                                                                                                                                                                                      AGCTGTTTGTGGAAAAAGGAGCAGAAGTTAATCAAGTTAAAGAACAGCTTTTACAGTCCAA 1657
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1837
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1897
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5
```

а

Ъ Ş В Ş DЬ Q Дb Š В Ŷ DЬ á ğ Ş В Š Ъ Q

Ωу 1	DЬ	0у 1	Дb	Qy :	Db	Qy	Db	Qγ	Db	Qy U	. Q	DЬ	Qy	DЬ	Qy	ДЬ	Qy	Дb	Qy	DЬ	Qy	Дb	Qy	ДĎ	Qy	ΔD	Qy	_G	0		_				
983 GC	234 GC	923	294 A	1863 G	354 G	1803 G			474	534 1690	30	594	1570	654	1516	714	1456	774	1396	834	133	80	, 127	95	12	99 d	11	Db 10	Qy 109	Db 1:	Ωу 1	Db 1	Qy	Db 1	Qy
CAGAGGT	GAGAACG	GGAGAATCTGCGCGTGCGC	l AGCAGCACAC	CAGCCGGG	AAAAAC	GAGATO	AACCTC	BAAGGGG	TGGAA	GGTGGA GTGCAC	TGTGAC	CACGTO	GAAAT	ATGTG	TGTCA	>			CA	AG -	6	94 CATT	6	4	16 TCT	9	56	.059 TGC	6	1119 cc	.036 GA	179 TT	977 -T	239	922 C
TACAAGTC	TCCGAG	Tecece	ACATCI	GTCGC	II CTACAG,	CTGAGG	AAAAGG	SCC AGO		AGGATT	TGGGTT	TCTGCC	CCTAG	ATGTGCCACCC/	AGCCCC,	GCCTCA	GCCTGC	TCATTI	ATCATC	CAGGAG	CAGGAG	II II	ATCAAC	II I	reect	CAATG-	CAATAG	CCGTGA	AAGGGA	AACAG1	AGATCA	I AAAAGA	ATCTGA	TCAAGO	TIGCIC
CACTGT	TGCGGA	TGCGCA	TCAACG	TTGATO	ACCAAG	TCTAAG		CATGCC	AACCC	CGTTGA	TCTGGA	TCACAG	CCGAGG	ACCAGC!	TGTCAAGCCCCACCCTCACTT-	GACCTG	GTCCTG	GTGACC	GTGACO	SAGTAT/	GAATAC	TATTGT	TACTGO	CTGGAC	CTGGA		GTCACT	TGCTCT	TGCGCT	TGAGCC	rcecca	AATTTG	CCAGGO		SOMPLES:
3CCCAG,	GGGCAG	GAGCTG	AGGCTC	AGGTGC	ACCCAL	SACCOM!	ACGGTG	CTCATC	PATCATO	CAAAAA	TAAAAA	CTGCTT	GGAGTT	TTTTGA	CTT	CACAG	GGAAAA	TAATAG	TGGTAG	VTACGGG	BAGGCT	AACGAA	AATICAC	ATTTAT	A mmm A C		CO Compa	GGCTAA	TGCCAA		T THIS	TGAATT	CICEAG	AGGACA	, K
TGTGCCCAGAGACATGGCCCATGTGGGC	CTACE	Command of the state of the sta	TAGTOT	ACTATA	CTATA	GGCTCAC	GCCACC	AAGTCT	GCCCAG	CAATGAC	CAATGAC	CAGGAT	CCGCCT	AAGCAG		CACTGA		AAAATA		AGGATA	SACCOCA.	AAGCTG	111000		AAAGO	- AASAA			GEOTOT	LOSVON.	acceded.A	STGTGG	TGAATG	GCAATG	}
GCCCAT	CTATC	STCATC/	GACATC	TTAGGT	TCCGGT	CAGTTCA	CAGTTC	TTGTTC	TGCTTT	CTTCTC	CTCCTC	CAGCA	TOTAL CAR	GACGCA	CACCA	ACCIGAC	TCACAA/	AGTICA	TAGAAT	TOCCT	AACAAA	CAGCAGC	JAGATT	GAAGTG	ATTAAG	GCTGAG	TACAGO	TACAGO	TTCAAC	CCTGAG	TTGATC	AGGTAC	STCTAGA	CCAGG	
GTGGGC	TCGCAA	AGATCAC	AGGTGA	GTATCA.	GCATCA	AGGCAT	AGATG!	CCGAA	GACAAG,	TATCGA	TTCCGG	TATECT	CAAGTG	CAAGCT	CTTCTT	CTTTCT	ATGGAAT	AGGGCA	GGACTC,	GGGAAC	TCTTCA	TCTTCA	TCGAGO	TTTCAG	GCACAA.	AGCCCC	AGGTTG	CGGACA	PACACTO	CCCACT	AATCAG	AACACT	TGAAAG	TACTAC	
CTATGA AGGACG	ATATGA	GTACCT	AGTACC1	AACCGA	AGCCAA	cceree) GCCTCC	GGAATO	AGTGAG	GACCTG	AACCTIC	GGAGAC	CTCTCG	CGCTGA	AGAAAA	GGAGAA	CCTGGC	CATCTO	ACATTG/	CTGTCC.	TTGAAC	TCGAGC	ACAACA	CATAAC!	ACAAAA	AGCTGG	TTTTCA	TTCACC	AATGTO	GAACCT)	TTCTAG,	TAGGGA	CAAAAT	TGAGAA	
CTATGAACCTTGCCT	GAGAAACGTCCGAGTGCGGAGGCGAGGCTACCCTATCGTCGCAAATATGAGGCTTTCCT	GGGGCT	CATCTTCAACGAGGCTCTAGTTGATCCAGGTGAAGTACCTGGGACTGAT	GCTCATCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC	GABAAACCTACAGACCAAGACCCAAACTATTTTTTTTTTT	CCACTC	AACCTGAAAAGGCCTCCTTAAACACTAACATTAAAGATGAGCCTCCTGCAGCTCGT	GAAGGGGCCACC	TICABACCCCATCATCATGCCCCAGTGCTTTGACAAGAGTGAGCTCAGTGACAA	GGTGGAAGGATTCGTTGACAAAAACAATGACCTTCTCTATCGAGACCTGTCCCAAGCCAT	GTGCTG	CACGTCTCTGCCTCACAGCTGCTTCAGGATCCAGCATTATGCTGCAGAGGTGACCTACAG	TTCCTC	ACCAGCATTTTGAAAGCAGGATCACCACAAGCTCGCTGACCAGAAGACCA	GCTGAA	GAGTGCCTCAGACCTGGCACAGTCACTGACCTTTTCTGGAGAAGTTGGAGACAC	CATGCT	TGCTATCATTTGTGACCTAATAGAAATAAAAAAAAAAAA	CTACTI	GAGCAGGAGGAGTATATACGGGAGGAGGATATATACATTCAACAA	TTACTC		GCTTTG	CATGGGTGTTCTGGACATTTATGGCTTTGAAGTGTTTCAGCATAACAGCTTCGAGCAGTT	3TGÁGA,	AATCAATGAAACCATTIIII	GATCAATAGGTCACTGGCCGCTATAAATCG	TGCCCGTGATGCTCTGGCTAAAAAACCTCTGTCTCTCTCT	TGCAAGGGATGCGCTTGCAAGCTTTATTA	rgaacag	GAAGATCATCGCCAAGGGGGAACACCTTCAATCAGTTCTAGACGAGCATTCAGTTT	TAAAAGAAATTTGTGAATTCCCCCC	TATCTGACCAGGCTCCTTAGATGAAAGCAAAATCAAAGATAAAATGAG	GTTCAAGCCCGAATGCCCAGGTTACTGAGAACCAGCTCAAA	
3GA 204	CCT 198	23	'GAT 192	AAA 295	CAA 186	rgar 35					TACCA 5			ACCAG	CAAGT	GACAC	GGATGA	GGATGA	CAATAA	CAACAA	TAAAGA	TCAAGTO	AGCAGT	AGCAGT	AGAAGG	ACCACGG	TAAATO	GTCAGAAA	GCTTAT	GCGGCA	TTCAGT	3ACCCAC	TAAAATO	CAAA	
2	32	л	22	G	62	Ğ	1802	415	1749	1689 475	535	1629	595	1569	655	1515	715	1455	775	1395	835	1335	1 895	T 1275	T 955	T 1215	:G 1000	\A 1155	I I FA 1060	TA 1095	112		11	976	
																													_	٠.	0	G.	0		

Ş Db οy 밁

D,

```
ARS94850
ARS
                                                                                                                                                                   Query Match
Best Local 9
                                                                                                                                                                                                                                                                                composition comprising these polynucleotides are useful as a high throughput method for detecting altered expression of one or more polynucleotides in a sample. The polynucleotides can be used in the diagnosis of disorders associated with foam cell development such as atherosclerosis, cerebral stroke, and cardiovascular disorders such as coronary artery disease. The polynucleotide sequences can also be used as PCR primers and probes. The polynucleotides of the invention are also useful in gene therapy. AAS94746-AAS95021 represent the human polynucleotide sequences of the invention which are differentially expressed during foam cell differentiation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2043
                                                                                                                                                                                                                                           Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The present invention relates to the isolation of human polynucleotide sequences that are differentially expressed during foam cell differentiation. The polynucleotide sequences of the invention or a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Claim 1; Page 156-158;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Composition useful for diagnosis of conditions, disorders or diseases associated with atherosclerosis, comprises several polynucleotides that are differentially expressed in foam cell development -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Shiffman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        05-APR-2000; 2000US-195106P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          04-APR-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WO200177389-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 cardiovascular disorder;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human DNA sequence #105 expressed during foam
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      14-FEB-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAS94850 standard; DNA; 4760
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (INCY-) INCYTE GENOMICS INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         18-OCT-2001
                                                    464
                                                                                                115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                174
    175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           54
                                                                                                                                               Local Similarity
nes 1119; Conserv
                                                                                           GGACTTTGTCCTGCTGGAGAATTTCACCAGTGAGGCTGCCTTCATTGAGAACCTCCGGCG 174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GACTAAGATCTTCATCCGATTCCCCAAGACCTTATTTGCCACAGAGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GGACGACATGGTGCTACTGTCCAAGATCACAGAGAACTCCATCGTGGAGAATCTGAAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GCGGTTCCGGGAGAACCTCATTTATACCTACATCGGTCCTGTCCTAGTCTCTGTCAATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2002-010925/01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGGTGTGGAGGTCCTATTTAATGAATTAGAAATTCCCCGTGGAAGAATACTCCTTTGGTAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGGTGTGGCCGTGTTGGTCAGACACCTCGGCTACAAGCCAGAAGAGTACAAAATGGGCAG 2102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       foam cell differentiation; atherosclerosis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ò
                                                                                                                                                                                                                                        4760 BP;
                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2001WO-US11128
                                                                                                                                                                                                                                      1331 A; 1150 C; 1233 G; 1046 T; 0 other
                                                                                                                                                                   10.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               æ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            315pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 coronary artery disease; gene therapy; ds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Lawn
                                                                                                                                          ; Score 385.2; 1; Pred. No. 1.4e 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Seilhamer
                                                                                                                                                                 1.4e-97;
                                                                                                                                                                                         DB 24;
                                                                                                                                          963;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            JJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         cell differentiation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Porter
                                                                                                                                               Indels
                                                                                                                                                                                       Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          cerebral
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GJ,
                                                                                                                                          76;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mikita
                                                                                                                                          Gaps
    234
                                                                                                                                                                                                                                                                                                                                                               also
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ;
                                                                                                                                             8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Qγ
                      Q
                                                                       DЬ
                                                                                                                  Š
                                                                                                                                                                 DЬ
                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                            Db
                                                                                                                                                                                                                                                                                                         δÃ
                                                                                                                                                                                                                                                                                                                                                             Db
                                                                                                                                                                                                                                                                                                                                                                                                       Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                         DЪ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        QY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Вp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Вр
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Д
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           B
                                                                       1538
                                                                                                                                                                                                                                                                 1418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1064
                        1243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           415
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   595
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  884
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                824
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               475
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GAGGAACCCAGGAGAGCGGAGTTTTCACATATTTTACCAGCTCATCGAGGGCGCCTCTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TGCCAAATATCATGAGCTACATCTCCAGAGTGTCTGGAGGAGGGACCAAAGTCCAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GAGATACATGGATGACTATATTTACATATATAGGATCTGTATTAATCTCAGTCAACCC
TGAAGTGTTTCAGCATAACAGCTTCGAGCAGTTCTGCATCAACTACTGCAATGAGAAGCT
                                                                                                                                                                                              GTACAGCCGGACATTCACCTGGCTGGTCAGAAAGATCAATAGGTCACTGGCCTCTAAGGA
                                                                                                                                                                                                                                                            CCACGTGACCCTCAACGTAGAGCAGGCCTGTTACACCCGGGATGCGCTCGCCAAGGCCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGGTATTCTCCACCTGGGAAACATCAGCTT----CAAAGAAGTTGGCAACTACGCGGCTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AGAGCAGAAACACCATTGGCATCACCAGCATGGACTATTATTACTACCTGAGCCTCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGGTGCCCCCGTGGAAGGCCACATTCTCAGTTACCTCCTGGAAAAGTCCCCGGGTGGTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGTGCGAGACCGCCTGTTGCAGAGCAACCCCGTGTTAGAGGCCTTTGGGAATGCCAAGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CACCAAGAGACTGCTCCAGTTCTATGCAGAGACCTGCCCAGCCCCTGAACGGGGTGGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGAAGAATACAACA - -
                                                                                                                                                                                                                                                                                        CCTGAGCCCACTGAACCTTGAACAGGCGGCATATGCCAAGGGATGCGCTTGCCAAGGCTGT
                                                                                                                                                                                                                                                                                                                                                             GAAAGAAAAGCTAACAAGCCGGCAGATGGATAGCAAGTGGGGAGGCAAATCCGAATCCAT 1417
                                                                                                                                                                                                                                                                                                                                                                                                          TAGGGAAGCCCTGACCCACAGGAAGATCATCGCCAAGGGGGAAGAGC-----T
                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGAGAGTGAAGAGTTTTTAGCTTTTCCTGCATATCTGCTAGGGATAAACCAGGACCGGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CAGCGTCCTACATCTGGGCAACATCCACTTTGCTGCTGACGAGGACAGCAATGCCCAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CGCCATGAATGTGATTGGGATCTTTGCAGAAGAGCAAACGCTGGTGTTGCAGATAGTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGCGCTGTCCGTCATTGACTTCACTGAGGATGAAGTGGAGGACTTGCTCAGCATCGTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GGGCTCATA---CAAGGTTGATGACATTGACGACAGGCGGGAGTTTCAGGAAACTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGGCCAGTGTGCCAAGGTCTCCATCAACGACAAGAGTGACTGGAAGGTTATGAGGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGAGACTCTCCGTCGGCTGGGCTTGGAACGGAACCCCCCAGAGCTACTTGTACCTGGTGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TGGGGAACCAGATGGTGGAAAGATCTCCAACTTCCTTCTGGAAAAATCTAGGGTGGTGAT 1003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TCTCCGCAACGATAACTCCAGCCGGTTTGGAAAGTACATGGATGTGCAGTTTGACTTCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CGTGAAGGACATTATCCTGCAGTCCAACCCGCTGCTGGAGGCCTTCGGGAACGCCAAGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GTATGAAAACCCACCACATATCTATGCCCTTGCAGATAATATGTACAGAAACATGATCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTATGAAGTACCACCTCATTTGTTTGCAGTGGCTGACACTGTATACCGGGCACTTCGTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TTTCAAGCAGATGCCATATTTTGGGGAAAAGGAAATTGAAATGTACCAAGGAGCGGCACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CTACCGAGACCTACAGATCTACAGCCGGCAGCATATGGAACGCTACCGTGGTGTCAGTTT
                                                                                                                    CGCTGAGAGCCCCAGCTGGCGAAGCACCACGGTTCTTGGGCTCCTGGACATTTACGGCTT 1242
                                                                                                                                                                 GCACGCCCGGGTCTTTGATTTCTTGGTAGATTCCATCAATAAAGCCATGGAGAAAGACCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TACTACTGAGAACCAGCTCAAATATCTGACCAGGCTCCTTGGTGGGAAGGTACAACACT 1014
                                                                  TTGGCGTCCTAGACATCTATGGCTT
                        1302
                                                                                                                                                                 1537
                                                                                                                                                                                                                                                                                                           1122
                                                                                                                                                                                                                                                                                                                                                                                                                                                           1357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1063
                                                                     1576
                                                                                                                                                                                                                                                            1477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     714
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            823
                                                                                                                                                                                                                                                                                                                                                                                                          1062
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   954
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    894
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  943
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 594
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                883
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             534
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              474
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        703
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          763
```

õ

Ъ Ş

B õ В Š В Š В δÃ В Ş дb Š В Ş g ş В δ В Ş В Ş Вþ Ş Вb Ş В Š В δÃ Вb 2510 GAAATCATGGAGGAAATTCGTGGCCCGGAAGAATACGTTCAAATGAGAAGAAGAAGCC 2567 2193 GGCGGCCTTGGAGGGGCTTTCATTGGCGACAGAAATTTCTCCGGGGTGAAGCGATCAGCC 2250 2450 TCTATTTCTTTTAGAAGAGATGAGAGAGAGAAAGTATGATGGGTATGCTCGAGTGATACA 2509 2133 CTTATTTGCCACAGAGGACTCCCTGGAAGTCCGGCGGCAGAGTCTAGCCACCAAGATCCA 2192 2390 2073 2330 1893 2013 ATGGCCCATGTGGGCAGGACGGCCCCAGGATGGTGTGGCCGTGTTGGTCAGACACCTCGG 2270 1953 TGCCTATCGTCGCAAATATGAGGCTTTCCTGCAGAGGTACAAGTCACTGTGCCCAGAGAC 2210 AAAGCATCAAGTCGAATATTTGGGTCTGAAAGAGAACATTCGAGTGAGAAGAGCTGGCTA 2269 1833 TATCCGGTGCATCAAGCCAAACGACGCCAAGCAGCCGGGTCGCTTTGATGAGGTGCTCAT 1892 2030 GTCTTTATTTCCGGAAAATCTGCAGGCTGACAAGAAAGGGCGCCCAACTACTGCCGGAAG 2089 1970 GGATGTGCTTTTTTATGGATCTCATCGAGCTTATGCAGAGCAGCGAGCTGCCTTTCATAAA 2029 1657 TGACCTCCTCTTCCGGAACCTGAAGGAGACCATGTGCAGCTCAATGAACCCCATCATGGC 1716 1862 GCAGATTGGGAGTCATGAGCACTTCAACAGTTGGAACCA------AGGCTTCAT 1909 1537 CCTGACGCACAAGCTCGCTGACCAGAAGACCAGGAAATCCCTAGACCGAGGGGAGTTCCG 1596 1803 1477 1757 CAAAGTGAACCCTCCTGGCATCATGAGCATCCTGGATGACGTGTGC------1423 GAAGTTCAA-----GGGCATCATCTCCATCTTGGATGAAGAGTGCCTGCGTCCTGGGGA 1476 1363 CATCGCGTGGGAACCTGTCCAGTACTTCAACAACAAGATCATCTGTGACCTGGTAGAGGA 1422 1577 TGAAATATTCCAGAAAAATGGCTTTGAACAGTTTTGTATCAATTTTGTTAATGAAAAACT 1636 CATGGACAGCAGTTCCAGCTGGGGAGGAGTAAAGTTTTCATCATCAAAGCCCCCGAGTC 2449 CTACAAGCCAGAAGAGTACAAAATGGGCAGGACTAAGATCTTCATCCGATTCCCCAAGAC 2132 CTGGCCTTCTTGGCAGGAGAGGAGGAGGAGGCAAGGCGTCCTGCTGCTGCTGCAGTCGGTCAA 2389 TGCCTATCGGCGCATCTTCCAAAAATTCCTACAGAGGTATGCCATTCTGACCAAAGCCAC CCGACATCAGGTGAAGTACCTGGGACTGATGGAGAATCTGCGGGTGCGCAGAGCTGGCTT 1952 CCAGTGCTTTGACAAGAGTGAGCTCAGTGACAAGAAGCGG----CCAGGACGGTGGCCAC 1772 GGCCACGGACCTGACCTTTCTGGAGAAAGTTTGGAGGACACTGTCAAGCCCCACCCTCACCTT 1536 AATAAGATGGACACCCATTGAGTACTTTAATAATAAATCGTATGTGACCTCATAGAGAA 1756 -GCCACGATGCATGCGGTGGGGTGAGGGGGGAGATCAGACGCTGCTCCAGAAACTTCAGAT 1861 2072 2329 2012

Search completed: December 9, Job time : 548 secs 2002, 12:33:02

g Š

```
Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Minimum DB
Maximum DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score
   seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Issued_Patents_NA:*
1: /cgn2_6/ptodata/1,
2: /cgn2_6/ptodata/1,
3: /cgn2_6/ptodata/1,
4: /cgn2_6/ptodata/1,
5: /cgn2_6/ptodata/1,
6: /cgn2_6/ptodata/1,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     length: 0
length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            441362 seqs, 153338381 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     December 9, 2002, 12:22:35; Search time 91 Seconds (without alignments)
12337.842 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    IDENTITY_NUC Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Match Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-09-893-371-3
3661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ggagcggggcgccgggtccg.....ccacctgcaccttttagcca 3661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GenCore version 5.1.3 Copyright (c) 1993 - 2002 Compugen Ltd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /cgn2_6/ptodata/1/ina/5A_COMB.seq:*
/cgn2_6/ptodata/1/ina/5B_COMB.seq:*
/cgn2_6/ptodata/1/ina/6A_COMB.seq:*
/cgn2_6/ptodata/1/ina/6B_COMB.seq:*
/cgn2_6/ptodata/1/ina/BCTUS_COMB.seq:*
/cgn2_6/ptodata/1/ina/backfiles1.seq:*
5661

3647

3647

364

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

11208

                            4 US-99-103-840A-1
US-09-339-993-1
US-08-471-033-24
US-08-471-044-24
US-08-471-046A-24
US-08-471-046A-24
US-08-470-566B-24
US-08-470-566B-24
US-08-470-59-24
US-08-470-59-24
US-08-471-334-1
US-08-474-933-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-08-998-416-1135

US-08-905-223-162

US-08-473-020A-6

US-08-403-852D-4

US-08-510-646B-4

US-08-510-646B-1

US-08-510-646B-1

US-08-510-646B-1

US-08-510-646B-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-08-938-105-2
US-09-172-422-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence Seq
                        Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Description
   Sequence
                                                            1 Appli
21 Appli
21 Appli
22 Appli
24 Appli
24 Appli
24 Appl
26 Appl
27 Appl
28 Appl
29 Appli
20 Appli
20 Appli
21 Appli
21 Appli
22 Appli
23 Appli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           6, Appli
4, Appli
4, Appli
4, Appli
1, Appli
1, Appli
1, Appli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2, Appli
2, Appli
1135, Ap
162, App
```

O

Matches 534;

Conservative

0;

Indels

35;

Gaps

129 TGGAGAATTTCACCAGTGAGGCTGCCTTCATTGAGAACCTCCGGCGGCGGTTCCGGGAGA 188

O

45	44	43	42	41	40	39	38	37	36	35	34	33	32	31	30	29	28
37.8	37.8	37.8			37.8										37.8	37.8	37.8
1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
7362	7362	7362	7362	7362	7362	7362	7266	7266	7177	7175	7175	7175	7175	7175	7175	7175	7175
4	ω	ω	2	2	2	۳	w	w	4	4	4	ω	ω	N	2	ν	μ
US-08-984-709A-7	US-08-450-562-7	US-08-949-386-7	US-08-149-097D-7	US-08-223-305C-7	US-08-193-078B-7	US-08-455-543A-7	US-09-452-007-1	US-08-713-118-1	US-09-268-163-7	US-08-450-272-8	US-08-984-709A-8	US-08-450-562-8	US-08-949-386-8	US-08-149-097D-8	US-08-223-305C-8	US-08-193-078B-8	US-08-455-543A-8
7,	Sequence 7, Appli	Sequence 1, Appli	Sequence 1, Appli	Sequence 7, Appli	Sequence 8, Appli	~	-	Sequence 8, Appli									

ALIGNMENTS

; NAME/KEY: ; LOCATION: US-08-938-105-2 RESULT 1 US-08-938-105-2 Sequence 2, Application US/08938105 Patent No. 6353151 GENERAL INFORMATION: Query Match Best Local : TELEFAX: (303) 863-0223 INFORMATION FOR SEQ ID NO: ATTORNEY/AGENT INFORMATION: NAME: CLOOK, WANDELL M. REGISTRATION NUMBER: 31,071 REFERENCE/DOCKET NUMBER: 3595 TELECOMMUNICATION INFORMATION: TELEPHONE: (303) 863-9700 COUNTRY: U.S.A. ZIP: 80203 COMPUTER READABLE FORM: MEDIUM TYPE: Floppy disk CORRESPONDENCE ADDRESS: ADDRESSEE: Sheridan Ross P.C. STREET: 1700 Lincoln St., Sui CURRENT APPLICATION DATA: APPLICATION NUMBER: US/08/938,105 FILING DATE: APPLICANT: Leinwand, Leslie A. APPLICANT: Vikstrom, Karen L. TITLE OF INVENTION: TRANSGENIC NUMBER OF SEQUENCES: 3 FEATURE: MOLECULE TYPE: CDNA SEQUENCE CHARACTERISTICS: LENGTH: 5661 base pairs STREET: 1700 CITY: Denver STATE: CO y Match 4.18; Local Similarity 49.28; TYPE: nucleic acid CLASSIFICATION: COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: PatentIn Release #1.0, Version #1.30 STRANDEDNESS: TOPOLOGY: lir CDS 1..5661 linear single 2: 3595-4 Score 149.4; DB 4; Pred. No. 8.2e-31; 0; Mismatches 516; Suite MODEL FOR HEART FAILURE Length 5661;

```
1348
                                1178
                                                                                                                                                                      1058
                                                                                                                                                                                                                                                                          1109
                                                                                                                                                                                                                                                                                                                                              1049
                                                                                                                                                                                                                                                                                                             938
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     642 CCCGGGTGGTGCACCAAAATCACGGAGAGCGGAACTTCCACGTCTTTTACCAGCTACTGG 701
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       702 AGGGGGGGAGGAGACTCTCCGTCGGCTGGGCTTGGAACGGAACCCCCAGAGCTACT 761
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       522 GGAATGCCAAGACTCTCCGCAACGATAACTCCAGCCGGTTTGGAAAGTACATGGATGTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          632
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              572
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    452
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAGGA 1182
                                               TCAGTGTACGAGAAGATGTTCAACTGGATGGTGACACGCATCAACGCAACCCTGGAGACC
                                                                                                                 TATGTCACCAAGGGGCAGAGTGTACAGCAGGTGTACTATTCCATCGGGGCACTGGCCAAG
                                                                                                                                       GAGCTCCTGAGCCCACTGAACCTTGAACAGGCGGCATATGCAAGGGATGCGCTTGCCAAG 1117
                                                                   GCTGTGTACAGCCGGACATTCACCTGGCTGGTCAGAAAGATCAATAGGTCACTGGCCTCT 1177
                                                                                                                                                                                                                                                        AGGAGCAGGCGGAGCCAGACGGCACAGAAGATGCTGACAAATCTG-CCTACCTCATGGGG
                                                                                                                                                                                    CTGAACTCAGCCGACCTGCTCAAGGGTCTGTGTCACCCTCAGGTGAAGGTGGGTAACGAG
                                                                                                                                                                                                                   GTGGAAGGTACAACACTTAGGGAAGCCCTGACCCACAGGAAGATCATCGCCAAGGGGGAA 1057
                                                                                                                                                                                                                                                                            GACAGCAATGCCCAGGTTACTGAGAACCAGCTCAAATATCTGACCAGGCTCCTTGGT 997
                                                                                                                                                                                                                                                                                                                            ACAAGCTGACAGGCGCCATCATGCACTATGGGAACATGAAGTTCAAGCAGAGCAGCGGG
                                                                                                                                                                                                                                                                                                                                                  TCAGCATCGTGGCCAGCGTCCTACATCTGGGCAACATCCACTTTGCTGCTGGTGA----CGAG 937
                                                                                                                                                                                                                                                                                                                                                                                                                AGGTTATGAGGAAGGCGCTGTCCGTCATTGACTTCACTGAGGATGAAGTGGAGGACTTGC
                                                                                                                                                                                                                                                                                                                                                                                            TGGCCACTGATAGCGCCTTTGATGTGCTGGGCTTCACAGCAGAGGAAAGGCCGGTGTCT 1048
                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCTTCGTCTCAGGGAGAG---GTGTCTGTGGCCTCCATTGATGACTCCGAGGAGCTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TGTACCTGGTGAAGGGCCAGTGTGGCCAAGGTCTCCTCCATCAACGACAAGAGTGACTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CCAACAAGAAGCCGGAGCTGCTGGACATGCTGCTGGTTACCAACAACCCGTACGACTATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CCCGGGTGATCTTCCAGCTAAAGGCTGAGAGGAACTACCATATCTTCTACCAGATCCTGT 871
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACTTTGGAGCCACAGGAAAGCTGGCTTCTGCAGACATAGAGACCTTACCTTCTGGAGAAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGTTTGACTTCAAGGGTGCCCCCGTGGGAGGGCCACATTCTCAGTTACCTCCTGGAAAAGT 641
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CAAACAAGGGCACCCTGGAGGACCAGATTATCCAGGCTAACCCTGCTCTGGAGGCCTTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AACGGGGTGGCGCAGAGCCGCCTGTTGCAGAGCAACCCCGTGTTAGAGGCCTTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CTCATTTGTTTGCAGTGGCTGACACTGTATACCGGGCACTTCGTACTGAGCGTCGGGACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TCCAGTACTTTGCTAGCATTGCAGCCATAGGGGACCGTAGCAAGAAGGACGACTCCTAATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TCCAGTTCTATGC-----AGAGACCTGCCCAGCCCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGTCCATCCTCATCACTGGAGAATCCGGAGCGGGGAAGACTGTCAACACGAAGCGTGTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AGGCAGTGATGATTTCTGGAGAGAGTGGGGGCAAGAAGAACAAGAGGGCCAAGAAGACTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CCCACATCTTCTCCATCTCTGACAACGCCTATCAGTACATGCTGACAGATCGGGAGAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AGATCTACAGCCGGCAGCATATGGAAGGCCTACCGTGGTGTCAGTTTCTATGAAGTACCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGATGATCTATACCTACTCAGGCCTCTTCTGTGTCACCGTCAACCCCTATAAGTGGCTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCTCATTTATACCCTACATCGGTCCTGTCCTAGTCTCTGTCAATCCCCTACCGAGACCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TGCTGACCTTCCTGCATGAGCCAGCTGTGCTCTACAATCTCAAGGAGCGCTATGCGGCCT
                                                                                                                                                                                      1227
                                                                                                                                                                                                                                                                                                                            1108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                821
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   931
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     811
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      751
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       581
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          691
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            631
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               571
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 511
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       331
                                                                            DЬ
                                                                                                        δÃ
                                                                                                                                              В
                                                                                                                                                                           Qy
```

밁 Ş В Ş 밁 Š В ð 밁 Š В Ş B ρy В Q Ъ Š В Ş Вb Š В ð В Š D Ş ₽ Ş дb Ş 망 Š ₽ Š дb

```
RESULT 2
US-09-172-422-2
US-09-172-422-2
; Sequence 2, Application US/09172422A
; Patent No. 6300485
; General Information:
APPLICANT: Limpormation:
APPLICANT: Chiu, Choi Ying
APPLICANT: Duhl, David
APPLICANT: Comman, Susan W.
APPLICANT: Heng, Song
APPLICANT: Sheffield, Val
APPLICANT: Heng, Song
APPLICANT: Weich, Juliet
TITLE OF INVENTION: MYOSIN IXA AND CYCLIC NUCLEOTIDE GATED
TITLE OF INVENTION: COMPOSITIONS, METHODS, AND USES THEREOF
CURRENT APPLICATION NUMBER: US/09/172,422A
: CURRENT APPLICATION NUMBER: US/09/172,422A
: CURRENT FILING DATE: 1998-10-14
: SOFTWARE: FastSEQ for Windows Version 3.0
: LENGTH. 2013
                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                             QY
                                                                                                                                                                                                                                                                                   Db
                                                                                                                                                                                                                                                                                                                  QΥ
                                                                                                                                                                                                                                                                                                                                                    Ъ
                                                                                                                                                                                                                                                                                                                                                                                    QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ър
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LENGTH: 8473TYPE: DNAORGANISM: Homo sapienUS-09-172-422-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ouery Match 2.9%; Score 104.6; DB 4; Length Best Local Similarity 50.1%; Pred. No. 2e-18; Matches 288; Conservative 0; Mismatches 284; Indels
            1251
                                                                             1191
                                                                                                                                                1131
                                                                                                                                                                                                                1071
                                                                                                                                                                                                                                                                                   1014
                                                                                                                                                                                                                                                   503
                                                                                                                                                                                                                                                                                                                   443
                                                                                                                                                                                                                                                                                                                                                      954
                                                                                                                                                                                                                                                                                                                                                                                                                        894
                                                                                                                                                                                                                                                                                                                                                                                      383
                                                                                                                                                                                                                                                                                                                                                                                                                                                       323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       834
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         143 AGTGAGGCTGCCTTCATTGAGAACCTCCGGGGGGGGGGTTCCGGGAGAACCTCATTTATACC 202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GTATTCTATTACCTCCTGGCAGGAGCAAGTGAAGA 1285
                       GTCTTTTACCAGCTACTGGAGGGGGGGGGGAGGAGGA
                                                           AAATATCTACTGGAGAAGTCCAGACTCGTTTATCAGGAGCATAATGAACGGAACTATCAT 1250
                                                                                                                                                                                             CCCGTGTTAGAGGCCTTTGGGAATGCCAAGAGTCTCCGCAACGATAACTCCAGCCGGTTT 562
                                                                                           AGTTACCTCCTGGAAAAGTCCCGGGTGGTGCACCAAAATCACGGAGAGCGGAACTTCCAC
                                                                                                                            GGGAAGTTTATTCAAGTAAATTACCAGGAAACAGGCACTGTACTTGGTGCCTATGTTGAA
                                                                                                                                                     GGAAAGTACATGGATGTGCAGTTTGACTTCAAGGGTGCCCCCGTGGGAGGCCACATTCTC
                                                                                                                                                                                                                                                                                                                                  TCAGGAGAGAGTGGTTCTGGGAAGACTCAAAGCACAACTTTCTTATTCACCACCTTACT 1013
                                                                                                                                                                                                                                                               GCTCTCAGTCAGAA----AGGATTTGCCAGTGGAGTAGAACAGATTATTCTTGGAGCTGGA 1070
                                                                                                                                                                                                                                                                                              GAGACCTGCCCAGCCCCTGAACGGGGTGGCGCAGTGCGAGACCGCCTGTTGCAGAGCAAC 502
                                                                                                                                                                                                                                                                                                                                                         TCTGGAGAGAGTGGGGCAGGCAAGACAGAGGCCACCAAGAGACTGCTCCAGTTCTATGCA 442
                                                                                                                                                                                                                                                                                                                                                                                                                              AAATATGTCAAAATGTATGATAACCACCAACTGGGAAAACCTGAGCCCCACATTTATGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TACATCGGTCCTGTCCTAGTCTCTGTCAATCCCTACCGAGACCTACAGATCTACAGCCGG
                                                                                                                                                                                                                                                                                                                                                                                                    GTGGCTGATGTAGCTTATCATGCCATGCTTCAGCGCAAAAAGAATCAGTGCATCGTGATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TATGTTGGCAGTATTCTAATAGTTATTAACCCATTCAAGTTTCTTCCTATTTATAACCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8473;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             \tau^{1}
                                                                                                                              1190
                                                                                                                                                                                                                                                                                                                                                                                                                                   382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     893
                                                                                                                                                                                                                                                                                                                                                                                                    953
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        833
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         773
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ļ
```

```
Ş
                                                                                                   В
                                                                                                                                   δÃ
                                                                                                                                                                                                    S
                                                                                                                                                                                                                                       рь
                                                                                                                                                                                                                                                                     δÃ
õ
                                   Вb
                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                          US-08-998-416-1135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-08-998-416-1135/c
                                                                                                                                                                                                                                                                                                                         Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 1135, Application US/08998416
                                                                                                                                                                                                                                                                                                      Best Local Similarity
Matches 154; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                        MOLECULE TYPE:
ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION DATA:
APPLICATION NUMBER: CH 0016/97
FILING DATE: 31-DEC-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE/DOCKET NUMBER: PF
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE: 31-DEC-1996 ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
386 GGAGAGAGTGGGGCAGGCCAAGACAGAGGGCCACCAAGA 422
                                   102
                                                                                                  162 TATGTGAACTTGTACCATGGGTCACCCAAGGAAGACAACGAGCCGCATATCTTTGCGGTA 103
                                                                                                                                                                      222
                                                                                                                                                                                                                                         282
                                                                                                                                                                                                                                                                     146 GAGGCTGCCTTCATTGAGAACCTCCGGCGGCGGTTCCGGGAGAACCTCATTTATACCTAC 205
                                                                                                                                   206 ATCGGTCCTGTCCTAGTCTCTGTCAATCCCTACCGAGACCTACAGATCTACAGCCGGCAG 265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Palana
                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                      STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME: Meigs, J. Timothy REGISTRATION NUMBER: 38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                           TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LENGTH:
                               GCGGAGCAGGCATACCGCAACTTGTTGACACAGAGGCAGGACCAGTCGGTGTTAGTAACA 43
                                                                                                                                                                    TCTGGGCTATTCCTCGTCGCGTTGAATCCGTACAGCAACATCAAGGTGTACACGCAGGAC 163
                                                                                                                                                                                                                                       GAGGCGTCTGTGTTGTACAACTTGGAGAACCGATACAAGGACGATATGATATACTTAT 223
                                                               GCTGACACTGTATACCGGGCACTTCGTACTGAGCGTCGGGACCAGGCAGTGATGATTTCT 385
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       27709
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     f: 3054 Cornwallis Road
Research Triangle Park
: No. 6239264th Carolina
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                623926
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         693 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          919-541-8689
                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Wendland, Jurgen
Knechtle, Philipp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Rebischung, Corinne
TENTION: GENOMIC DNA SEQUENCES OF ASHBYA GOSSYPII
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pohlmann, Rainer
Steiner, Sabine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mohr, Christine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Philippsen,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PatentIn Release #1.0, Version #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                          linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NO.
                                                                                                                                                                                                                                                                                                                                                                                          PAG1691RP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             919-541-8587
                                                                                                                                                                                                                                                                                                                                                                                                                        DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                24-DEC-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                         single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      6239264artis Corporation
                                                                                                                                                                                                                                                                                                                      2.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AND USES THEREOF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US/08/998,416
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Peter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             38,241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1135:
                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PF/5-30306/A/CGC1976
                                                                                                                                                                                                                                                                                                                        Score 80.2; DB 4; Pred. No. 2.8e-12;
                                                                                                                                                                                                                                                                                                        Mismatches 123;
                                                                                                                                                                                                                                                                                                                                      Length 693;
                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                      0;
```

```
Ω
                                                               B
                                                                                            Ş
                                                                                                                              밁
                                                                                                                                                            QΥ
                                                                                                                                                                                                                                                          ; IDENTIFICATION METHOD: Von Heijne matrix; OTHER INFORMATION: SCORE 3.6; OTHER INFORMATION: SEQ CTSLLQLYDASNS/EW US-08-905-223-162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 4
US-08-905-223-162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -08-50.
Sequence 162, App...
No. 6222029
                                                                                                                                                                                                           Query Match
Best Local Similarity
                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEFAX: (619) 235-0176 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: APPLICANT:
                                                                                                                                                          1858 GCCAAGCAGCCGGGTCGCTTTGATGAGGTGCTCATCCGACATCAGGTGAAGTACCTGGGA 1917
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STREET: 50.
CITY: San Diego
CTATE: California
                            1978 TTCCTGCAGAGGTACAAGTCACTG 2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATTORNEY/AGENT INFORMATION:
NAME: Israelsen, Ned A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOFTWARE: WORD
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER READABLE FORM:
                                                                                            1918 CTGATGGAGAATCTGCGCGTGCGCAGAGCTGGCTTTGCCTATCGTCGCAAATATGAGGCT 1977
                                                                                                                                                                                                                                                                                                                                                         FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                    ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE OF INVENTION: NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                       MOLECULE TYPE:
                                                                                                                              50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE/DOCKET NUMBER: 29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER: IBM PC compatible OPERATING SYSTEM: Win95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  42
                                                                                                                                                                                                                                                                                                                         NAME/KEY: sig_peptide LOCATION: 56..271
                                                                                                                                                                                                                                                                                                                                                                                                                                      STRANDEDNESS:
TOPOLOGY: LII
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDIUM TYPE: Floppy Disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ZIP: 92101-3505
                                                                                                                                                                                                                                                                                                                                                                        TISSUE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GGGGAGTCTGGGGCAGGTAAGACCGAGAATACAAAGA
                                                                                                                            GGCTAGATGCCAGACCAGTTTGACCAGGCGGTTGTGCTGAACCAGCTGCGGTACTCAGGG 109
TTTTACAAAAGGTATAAAGTGCTG 193
                                                            ATGCTGGAGACTGTGAGAATCCGCAAAGCTGGGTATGCGGTCCGAAGACCCCTTTCAGGAC 169
                                                                                                                                                                                            81;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUCLEIC ACID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               501 West Broadway
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Application
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Edwards, Jean-Baptiste
Duelert, Aymeric
                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                    SS: DOUBLE LINEAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Lacroix, Bruno
/ENTION: 5' ESTS FOR SECRETED PROTEINS
                                                                                                                                                                                                                                                                                                                                                                                       Homo Sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Knobbe, Martens, Olson & Bear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (619) 235-8550
                                                                                                                                                                                                                                                                                                                                                                                                                       CDNA
                                                                                                                                                                                                                                                                                                                                                                        Brain
                                                                                                                                                                                                           1.2%; 56.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US/08/905,223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US/08905223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    29,655
                                                                                                                                                                                          Score 43.2; DB 4;
Pred. No. 0.029;
0; Mismatches 63;
                                                                                                                                                                                              63;
                                                                                                                                                                                                                          Length 364;
                                                                                                                                                                                            Indels.
                                                                                                                                                                                          0;
                                                                                                                                                                                          Gaps
                                                                                                                                                                                            0
```

RESULT 5

```
RESULT 6
US-08-403-852D-4
                                                                                                                                                                                                                                Š
                                                                                                                                                                                               ₽
                                                                                                                                                                                                                                                                      д
                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                  õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-08-473-020A-6
GENERAL INFORMATION:
APPLICANT: Blanc,
APPLICANT: Blanche
APPLICANT: Crouzet
                                                                       Sequence 4, Application US/08403852D Patent No. 5891695
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-08-473-020A-6
                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE/DOCKET NUMBER: A544
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 781-1989
TELEFAX: (415) 398-3249
INFORMATION FOR SEQ ID NO: 6:
SEQUENCE CHARACTERISTICS:
LENGTH: 343 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Patent No.
                                                                                                                                                                                                         1387 CTTCAACAAGATCATCTGTGACCTGGTAGAGGAGAAGTT 1428
                                                                                                                                                                                                                                                                                                            1327
                                                                                                                                                                                                                                                                                                                                                                    1267 CGAGCAGTTCTGCATCAACTACTGCAATGAGAAGCTGCAGCAGCTCTTCATCGAGCTGAC 1326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE OF INVENTION:
TITLE OF INVENTION:
TITLE OF INVENTION:
TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                  139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TOPOLOGY: 11
MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER READABLE FORM:
MEDIUM TYPE: FiDppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: US 07/623,729
FILING DATE: 14-DEC-1990
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                 259 GGTGGGCGACCAGTCGATCGGTGACCTGATCGCCGAGGCGAT 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Hance, Allan J
APPLICANT: Grandchamp-Desraux, Bernard
APPLICANT: Levy-Frebault, Veronique
APPLICANT: Glequel, Brigitte
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                           Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: nucleic acid
STRANDEDNESS: both
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NAME: Dreger, Walter H
REGISTRATION NUMBER: 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: FILING DATE: 06-JUICLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ADDRESSEE: Walter H. Dreger
STREET: 4 Embarcadero Center, Suite 3400
CITY: San Francisco
STATE: California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COUNTRY: U
                                                                                                                                                                                                                                                                                TCTCAAGTCGGAGCAGGAGGAATACGAGGCTGAGGGCATCGCGTGGGAACCTGTCCAGTA 1386
                                                                                                                                                                                                                                                                                                                                CAACCTGCTCAGCTTCAAGTGCGGCATCGAGAAGGCGGTCGAGAAGGTCACCGAGACCCT 198
                                                                                                                                                                                                                                                        GCTCAAGCCGGCCAAGGAGGTCGAGACCAAGGAGCAGATCGCCGCGACCGCCGTGATCTC 258
                                                                                                                                                                                                                                                                                                                                                                                                                    1.18;
l Similarity 53.18;
86; Conservation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   6, Application US/08473020A
5. 5877273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OF SEQUENCES:
Blanc, Veronique
Blanche, Francis
Crouzet, Joel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        06-JUN-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Nucleotide sequences of actinomycetales, applications to the synthesis or detection of nucleic acids, products of expression of such sequences and application as immunogenic compositions.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US/08/473,020A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      24190
                                                                                                                                                                                                                                                                                                                                                                                                                  0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                Score 40.4; DB 2; Pred. No. 0.17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A54435
                                                                                                                                                                                                                                                                                                                                                                                                            76; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 343;
                                                                                                                                                                                                                                                                                                                                                                                                              0,:
                                                                                                                                                                                                                                                                                                                                                                                                              0
```

```
;
US-08-403-852D-4
                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEFAX: (202) 408-4400
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 1208 base pair:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION DATA:

APPLICATION NUMBER: FR 92,
FILING DATE: 25-SEP-1992
ATTORNEY/AGENT INFORMATION:
NAME: Meyers, Kenneth J.
REGISTRATION UMBER: 25, 14
REFERENCE/DOCKET NUMBER: 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE OF INVENTION: POLITICE OF INVENTION: Bio:
TITLE OF INVENTION: Cod.
NUMBER OF SEQUENCES: 43
CORRESPONDENCE ADDRESS:
ADDRESSEE: Finnegan, 1
                                                                                                                                                                                                                                                                                                                                                                            FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                          ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                        HYPOTHETICAL: NO
                                   747
                                                                   467
                                                                                                  687
                                                                                                                                  407
                                                                                                                                                                                                                               567
                                                                                                                                                                                                                                                                                                                                                                                                                                                   MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ZIP: 20005-3315
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                627
                                                                                                                                                                                               347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                           NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: nucleic acid
STRANDEDNESS: double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: FILING DATE: 25-SEI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: US/01
FILING DATE: 10-MAY-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CITY: Washington STATE: D.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STREET:
AGACCCAGGTCACCAT 542
                                ACCCCCAGAGCTACTT 762
                                                         CGCGCCGGCTCACCGAGGTCCGCAAGGACGGCACCGTCCCCTACCTGCGCCCCGACGGCA
                                                                                    TTTACCAGCTACTGGAGGGGGGGGAGGAGGACTCTCCGTCGGCTGGGCTTGGAACGGA 746
                                                                                                                                                                                   AGGGCGAGGACGAGCTCGACCAGCAGGGCGCGGCGACCAGGGCCTGATGTTCGGCT 406
                                                                                                                                                                                                                   AGTACATGGATGTGCAGTTTGACTTCAAGGGTGCCCCCGTGGGAGGCCACATTCTCAGTT 626
                                                                                                                      ACGCCACCGACGAGACCCCCTCGCTGATGCCGCTGCCCATCGAGCTCGCCCACCGCCTCT
                                                                                                                                          ACCTCCTGGAAAAGTCCCGGGTGGTGCACCAAAATCACGGGAAGCGGAACTTCCACGTCT 686
                                                                                                                                                                                                                                                            98;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          D.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1208 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     E: Finnegan, He
                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                      S.pristinaespiralis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               De Crecy-Lagard, Valerie
VENTION: Polypeptides Involved In The
VENTION: Biosynthesis Of Streptogramins, Nucleotide Sequences
VENTION: Coding For These Polypeptides And Their Use
EQUENCES: 43
                                                                                                                                                                                                                                                                                                                                            1..1208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Jacques, Nathalie
Lacroix, Patricia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Thibaut, Denis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Debussche, Laurent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Zagorec, Monique
                                                                                                                                                                                                                                                                                                                                                                                                                                         NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (202)
                                                                                                                                                                                                                                                                                                                                                                                                                                                        CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             25-SEP-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               408-4400
                                                                                                                                                                                                                                                                        1.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  408-4000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PCT/FR 93/00923
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FR 92/11441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US/08/403,852D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            25,146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Henderson, Farabow, Garrett & Dunner
t, N.W., Suite 700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4..
                                                                                                                                                                                                                                                       Score 39.2; DB Pred. No. 0.68; 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             03806.0054-00000
                                                                                                                                                                                                                                                                                     DB 2;
                                                                                                                                                                                                                                                                                    Length 1208;
                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                  Gaps
                                                         526
                                                                                                                      466
                                                                                                                                                                                                                                                   0;
```

B ρy DЬ δÃ В QΥ Ъ Qy

```
õ
                                                                                                  US-08-510-646B-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-08-510-646B-4
                                    Matches
                                                  Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: De Crecy-
TITLE OF INVENTION:
TITLE OF INVENTION:
TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                            NFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: FR 9
FILING DATE: 25-SEP-1992
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION DATA:
APPLICATION NUMBER: PCT/FR 93/00923
FILING DATE: 25-SEP-1993
PRIOR APPLICATION DATA:
PRIOR APPLICATION DATA:
                                                                                                                               FEATURE:
NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CORRESPONDENCE ADDRESS:
                                                                                                                                                                               ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                         SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CURRENT APPLICATION DATA:
                                                                                                                                                                                              HYPOTHETICAL:
ANTI-SENSE: NO
                                                                                                                                                                                                                           MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                           TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
567 AGTACATGGATGTGCAGTTTGACTTCAAGGGTGCCCCCGTGGGAGGCCACATTCTCAGTT 626
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER: IBM PC
OPERATING SYSTEM:
SOFTWARE: PatentI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: FILING DATE: 03-AUC
                                                                                                                                                                                                                                                                                                                                                                                        NAME: Meyers, Kenneth J.
REGISTRATION NUMBER: 25,146
REFERENCE/DOCKET NUMBER: 03806.0054-01000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COUNTRY:
                                                                                                                                                              ORGANISM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: FILING DATE: 10-MA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CLASSIFICATION:
                                                                                                                 LOCATION:
                                                                                                                                                                                                                                               TOPOLOGY:
                                                                                                                                                                                                                                                          STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                          TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             INFORMATION:
                                    98;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      20005-3315
                                                                                                                                                                                                                                                                          nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                D.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Application US/08510646B
                                                                                                                                                                                                                                                                                         1208 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               E: Finnegan, Henderson, Farabow, Garrett & Dunner 1300 I Street, N.W., Suite 700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   USA
                                                                                                                                                                                                                                                                                                                                            (202)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               De Crecy-Lagard, Valerie
VENTION: Polypeptides Involved In The
VENTION: Biosynthesis Of Streptogramins, Nucleotide Sequences
VENTION: Coding For These Polypeptides And Their Use
EQUENCES: 45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Thibaut, Denis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Jacques, Nathalie
                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Lacroix,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Crouzet, Joel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Blanche, Francis
                                                                                                                                                              S.pristinaespiralis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PatentIn Release #1.0, Version #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Debussche, Laurent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Zagorec, Monique
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Blanc,
                                                                                                              1..1208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   IBM PC compatible
SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                           linear
                                                                                                                                                                                                                                                                                                                                                            (202) 408-4000
                                                                                                                                                                                                               NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     03-AUG-1995
                                                                                                                                                                                                                                CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                         JMBER: FR 92/11441
25-SEP-1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       10-MAY-1995
                                                                                                                                                                                                                                                              double
                                                                                                                                                                                                                                                                                                                                           408-4400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Veronique
                                                  1.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Patricia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US 08/403,852
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US/08/510,646B
                                                                                                                                                                                                                                                                                                                             4.
                                   0;
                               Score 39.2; DB 3; Length 1208; Pred. No. 0.68; o; Mismatches 98; Indels 0
                                 0,
                               Gaps
                                   0;
```

```
γ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 8
US-09-231-818-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GENERAL
TYPE: nucleic acid
STRANDENESS: double
TOPOLOGY: linear
MOLECULE TYPE: CONA
HYPOTHETICAL: NO
                                                                                                                              TELEFAX: (202) 408-44 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER READABLE FORM:
MEDLIM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
                                                                                                                                                                             REGISTRATION NUMBER: 25,146
REFERENCE/DOCKET NUMBER: 03
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                        ATTORNEY/AGENT INFORMATION: NAME: Meyers, Kenneth J.
                                                                                                                                                                                                                                                                                                            FILING DATE: 25-SEP-PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                             SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         527
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             467
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               687
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   407
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     627
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         347
                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 10-MAY APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: US/UG
APPLICATION NUMBER: US/UG
PTI.THG DATE: 10-MAY-1995
                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STREET: 1300 I St
CITY: Washington
                                                                                                                                                                                                                                                                            APPLICATION NUMBER: FR 92/11441 FILING DATE: 25-SEP-1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COUNTRY: USA
ZIP: 20005-3315
                                                                                          LENGTH:
                                                                                                                                                                  TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AGACCCAGGTCACCAT 542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACCCCCAGAGCTACTT 762
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AGGGCGAGGACGAGCTCGACCAGCAGGGCGCCGACCAGGGCCTGATGTTCGGCT 406
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CGCGCCGGCTCACCGAGGTCCGCAAGGACGGCACCGTCCCCTACCTGCGCCCCGACGGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACGCCACCGACGAGACCCCCTCGCTGATGCCGCTGCCCATCGAGCTCGCCCACCGCCTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACCTCCTGGAAAAGTCCCGGGTGGTGCACCAAAATCACGGAGAGCGGAACTTCCACGTCT 686
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           , Application US/09231818 6171846
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           D.C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             E: Finnegan, Henderson, Farabow, Garrett & Dunner
1300 I Street, N.W., Suite 700
                                                                                        1208 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 De Crecy-Lagard, Valerie
VENTION: Polypeptides Involved In The
VENTION: Biosynthesis Of Streptogramins, Nucleotide Sequences
VENTION: Coding For These Polypeptides And Their Use
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Thibaut, Denis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Crouzet, Joel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Zagorec, Monique
Debussche, Laurent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Jacques, Nathalie
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Lacroix, Patricia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Blanche, Francis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Blanc, Veronique
                                                                                                                                                                  (202) 408-4000
                                                                                                                                                                                                                                                                                                                                   25-SEP-1993
                                                                                                                                                 408-4400
                                                                                                                                                                                                                                                                                                                                                    PCT/FR 93/00923
                                                                                                                                                                                                                                                                                                                                                                                      US/08/403,852
                                                                                                                                                                                                                                                                                                                                                                                                                                            US/09/231,818
                                                                                                                                4.
                                                                                                                                                                                                      03806.0054-00000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 466
```

```
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, 1
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-08-403-852D-1
                                                                    NAME: Meyers, Kenneth J.
REGISTRATION NUMBER: 25,146
REFERENCE/DOCKET NUMBER: 03806.0054-00000
TELECOMMUNICATION INFORMATION:
                                                                                                                                                            ATTORNEY/AGENT INFORMATION:
NAME: Meyers, Kenneth J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-09-231-818-4
                                                                                                                                                                                                                                             PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                    CURRENT APPLICATION NUMBER: US/08/403,0020
APPLICATION NUMBER: US/08/403,0020
FILING DATE: 10-MAY 1995
PRIOR APPLICATION DATA:
PRIOR APPLICATION NUMBER: PCT/FR 93/00923
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Debussche, Laurent
APPLICANT: De Crecy-Lagard, Valerie
TITLE OF INVENTION: Polypeptides Involved In The
TITLE OF INVENTION: Blosynthesis Of Streptogramins, Nucleotide Sequences
TITLE OF INVENTION: Coding For These Polypeptides And Their Use
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local
                                                                                                                                                                                           APPLICATION NUMBER: FR 92/11441 FILING DATE: 25-SEP-1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                  APPLICATION NUMBER: PCT/I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     quence 1, Application US/08403852D tent No. 5891695
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STREET: 1300 I S
CITY: Washington
STATE: D.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    527 AGACCCAGGTCACCAT 542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         687 TTTACCAGCTACTGGAGGGGGGGGGGGAGGAGACTCTCCGTCGGCTGGGCTTGGAACGGA 746
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      407 AGGCCACCGAGGAGGCCCCTCGCTGATGCCGGTGCCCATCGAGCTCGCCCACCGCCTCT 466
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 347 AGGCGAGGACGACCTCGACCAGCAGGGCGCGGCGACCAGGGCCTGATGTTCGGCT 406
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             567 AGTACATGGATGTGCAGTTTGACTTCAAGGGTGCCCCCCGTGGGAGGCCCACATTCTCAGTT 626
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORIGINAL SOURCE:
ORGANISM: S.pristinaespiralis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local Similarity
es 98; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            20005-3315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACCCCCAGAGCTACTT 762
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CGCGCCGGCTCACCGAGGTCCGCAAGGACGGCACCGTCCCCTACCTGCGCCCCGACGGCA 526
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCTCCTGGAAAAGTCCCGGGTGGTGCACCAAAATCACGGAGAGCGGAACTTCCACGTCT 686
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               D.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           E: Finnegan, Henderson, Farabow, Garrett & Dunner
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Blanche, Francis
Crouzet, Joel
Jacques, Nathalie
Lacrolx, Patricia
Thibaut, Denis
Zagorec, Monique
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Blanc, Veronique
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CDS
1..1208
                                                                                                                                                                                                                                                                                                                                                                                        Release #1.0, Version #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1.1%; Score 39.2; DB 50.0%; Pred. No. 0.68;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             _DB 4; Length 1208;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 98;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0,
                                                                                                COUNTRY: USA
ZIP: 2005-3315
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
CURRENT APPLICATION DATA;
APPLICATION NUMBER: US/08/510,646B
FILING DATE: 03-AUG-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 10
US-08-510-646B-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence
                 FILING DATE: 03-AUG-1995
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/403,852
FILING DATE: 10-MAY-1995
PRIOR APPLICATION TO THE PRIOR APPLICATION 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-08-403-852D-1
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: De Crecy-Lagard, Valerie
TITLE OF INVENTION: Polypeptides Involved In The
TITLE OF INVENTION: Blosynthesis Of Streptogramins, Nucleotide Sequences
NUMBER OF SEQUENCES: 45
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                        STREET: 1300 I S
CITY: Washington
STATE: D.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4084 AGACCCAGGTCACCAT 4099
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4024 CGCGCCGGCTCACCGAGGTCCGCAAGGACGGCACCGTCCCCTACCTGCGCCCCGACGGCA 4083
                                                                                                                                                                                                                                                                                                                                                                  ADDRESSEE: Finnegan, Henderson, Farabow, Garrett & Dunner STREET: 1300 I Street, N.W., Suite 700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3964 ACGCCACCGACGAGACCCCCCTCGCTGATGCCGCCTGCCCATCGAGCTCGCCCACCGCCTCT 4023
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MOLECULE TYPE: "CONTROL TYPE: "CONTROL TYPE: NO ANTI-SENSE: NO ORIGINAL SOURCE: ORGANISM: S.pr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEFAX: (202) 408-4400 INFORMATION FOR SEQ ID NO: 1:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3904 AGGGCGAGGACGAGCTCGACCAGCAGGGGGGGGGGGGGACCAGGGCCTGATGTTCGGCT 3963
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               627 ACCTCCTGGAAAAGTCCCGGGTGGTGCACCAAAATCACGGAGAGCGGAACTTCCACGTCT 686
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   567 AGTACATGGATGTGCAGTTTGACTTCAAGGGTGCCCCCGTGGGAGGCCACATTCTCAGTT 626
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE CHARACTERISTICS:
LENGTH: 5392 base pairs
TYPE: nucleic acid
STRANDEDNESS: double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCCCCAGAGCTACTT 762
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ļ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 11 Similarity
98; Conserva
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Application US/08510646B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Thibaut, Denis
Zagorec, Monique
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Blanche, Francis
Crouzet, Joel
Jacques, Nathalie
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Debussche, Laurent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Lacroix, Patricia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Blanc, Veronique
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S.pristinaespiralis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1.1%; Score 39.2;
50.0%; Pred. No. 1
```

멍 Ş В õ В Ş

0;

Mismatches

DB 2;

Length 5392; Indels

0;

0;

PRIOR APPLICATION DATA:

APPLICATION NUMBER: PCT/ FILING DATE: 25-SEP-1993

PCT/FR 93/00923

```
δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; ORGANISM: S.pristinaespiralis US-08-510-646B-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-09-231-818-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NAME: Meyers, Kenneth J.

REGISTRATION NUMBER: 25,146
REFERENCE/DOCKET NUMBER: 03806
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 408-4400
TELEPHONE: (202) 408-4400
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 5392 base pairs
TYDER nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
                                                                                                                                                                     TITLE OF INVENTION: ETITLE OF INVENTION: ETITLE OF INVENTION: COMMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                   quence 1, Application US/09231818 tent No. 6171846
COMPUTER READABLE FORM: MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                               APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4084 AGACCCAGGTCACCAT 4099
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4024 CGCGCCGGCTCACCGAGGTCCGCAAGGACGGCACCGTCCCCTACCTGCGCCCCGACGGCA 4083
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3964 ACGCCACCGACGACACCCCCTCGCTGATGCCGCTGCCCATCGAGCTCGCCCACCGCCTCT 4023
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3904 AGGGCGAGGACGACGACCAGCAGCAGGCCGGCGATGTTCGGCT 3963
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ANTI-SENSE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MOLECULE TYPE:
HYPOTHETICAL:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE: 25-SEP-1992
ATTORNEY/AGENT INFORMATION:
NAME: Meyers, Kenneth J.
                                                                                                                                                     CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   687
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       747 ACCCCCAGAGCTACTT 762
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       627 ACCTCCTGGAAAAGTCCCGGGTGGTGCACCAAAATCACGGAGAGCGGAACTTCCACGTCT 686
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 567 AGTACATGGATGTGCAGTTTGACTTCAAGGGTGCCCCCGTGGGAGGCCACATTCTCAGTT 626
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1.1%;
Local Similarity 50.0%;
hes 98; Conservation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: nucleic acid
STRANDEDNESS: doub
TOPOLOGY: linear
                                    COUNTRY: USA
ZIP: 20005-3315
                                                                           STATE:
                                                                                           CITY: Washington
                                                                                                                STREET:
                                                                                                                                  ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TTTACCAGCTACTGGAGGGGGGGGGGGGAGGAGCTCTCCGTCGGCTGGGCTTGGAACGGA 746
                                                                           D.C
                                                                                                          E: Finnegan, Henderson, Far
1300 I Street, N.W., Suite
                                                                                                                                                                                                                                       De Crecy-Lagard, Valerie
                                                                                                                                                                                                                                                              Debussche, Laurent
                                                                                                                                                                                                                                                                                     Zagorec, Monique
                                                                                                                                                                                                                                                                                                   Lacroix, Patricia
Thibaut, Denis
                                                                                                                                                                                                                                                                                                                                        Jacques, Nathalie
                                                                                                                                                                                                                                                                                                                                                             Crouzet, Joel
                                                                                                                                                                                                                                                                                                                                                                             Blanche, Francis
                                                                                                                                                                                                                                                                                                                                                                                                  Blanc,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Z
O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              double
                                                                                                                                                                                                                                                                                                                                                                                            Veronique
                                                                                                                                                                     Polypeptides Involved In The Biosynthesis Of Streptogramins, Nucleotide Sequences Coding For These Polypeptides And Their Use 43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FR 92/11441
                                                                                                              Henderson, Farabow, Garrett & Dunner t, N.W., Suite 700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 39.2; DB 3; Length 5392;
Pred. No. 1.5;
0; Mismatches 98; Indels 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  03806.0054-01000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
```

```
GENERAL INFORMATION:
APPLICANT: FLEISCHMAN, Robert D.
APPLICANT: HHITE, Owen R.
APPLICANT: FRASER, Claire M.
APPLICANT: VENTER, JOHN C.
APPLICANT: VENTER, JOHN C.
TITLE OF INVENTION: TUBERCULOSIS
FILE REFERENCE: 24366-20007.00
CURRENT APPLICATION NUMBER: US/09/103,840A
CURRENT FILING DATE: 1998-06-24
NUMBER OF SEQ ID NOS: 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δõ
                                                                                                                                                                                                                                                                                                             RESULT 12
US-09-103-840A-1/c
                                                                                                                                                                                                                                                                                                                                                                                                                               QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-09-231-818-1
                SOFTWARE: PatentIn Ver. 2.1 SEQ ID NO 1
                                                                                                                                                                                                                                                                     Sequence 1, Application US/09103840A Patent No. 6294328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEFAX: (202) 408-44
INFORMATION FOR SEQ ID NO:
LENGTH: 4411529
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM: S.P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MOLECULE TYPE: CU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: FR 92/11441 FILING DATE: 25-SEP-1992 ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION DATA:
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                          4084 AGACCCAGGTCACCAT 4099
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4024 CGCGCCGGCTCACCGAGGTCCGCAAGGACGGCACCGTCCCCTACCTGCGCCCCGACGGCA 408:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3904 AGGGCGAGGACGAGCTCGACCAGCAGGGCGCCGGCGACCAGGGCCTGATGTTCGGCT 3963
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ANTI-SENSE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TELEPHONE: (202) 408-4000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           687 TTTACCAGCTACTGGAGGGGGGGGGGAGGAGACTCTCCGTCGGCTGGGCTTGGAACGGA 746
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   567 AGTACATGGATGTGCAGTTTGACTTCAAGGGTGCCCCCGTGGGAGGCCACATTCTCAGTT 626
                                                                                                                                                                                                                                                                                                                                                                                                                               747 ACCCCCAGAGCTACTT 762
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1.18;
Local Similarity 50.08;
hes 98; Conserva+:...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LENGTH: 5392 base pairs TYPE: nucleic acid STRANDEDNESS: double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAME: Meyers, Kenneth J
REGISTRATION NUMBER: 25
REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE: 10-MA APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: US/09/231,818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCTCCTGGAAAAGTCCCGGGTGGTGCACCAAAATCACGGAGAGCGGAACTTCCACGTCT 686
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACGCCACCGACGAGACCCCCTCGCTGATGCCGCTGCCCATCGAGCTCGCCCACCGCCTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (202)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S.pristinaespiralis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            10-MAY-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        25-SEP-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     408-4400
ID NO: 1:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PCT/FR 93/00923
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US/08/403,852
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  25,146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  03806.0054-00000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 39.2; D
Pred. No. 1.5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                     STRAIN ANALYSIS IN MYCOBACTERIUM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DΒ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          98;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 5392;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4023
```

0

```
RESULT 14
US-08-471-033-24
                                                                                                                                                                                             Б
                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                       рЬ
                                                                                                                                                                                                                                                                                   ş
                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                             õ
                                                                                                                                                                                                                                                                                                                                                                                                                                    NAME/KEY: unsure
LOCATION: 1105
OTHER INFORMATION: unknown
US-09-339-993-1
                                                                                           Sequence 24, Application US/08471033 Patent No. 5770696
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 13
US-09-339-993-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Db 641716 TCACCTATCTGGCCAAGGGCGATCACGACGAGAAGC 641681
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Db 641776 TCCGGCGGTTCGGCCCAATCTTCGCCCCAGTACTACGGGCAATCCGAGGCGCCCATGGTGA 641717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Db 641836 CGCTGGAAACCGTCTACTACGGCGCCTCGGCGATCAACCCGGTGCGACTAGCCGAGGCGA 641777
                                              GENERAL INFORMATION:
APPLICANT: Warren,
APPLICANT: KOZIEL
                                                                                                                                                                                                                                                                                                                                                                        Query Match 1.1
Best Local Similarity 53.6
Matches 81; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION:
APPLICANT: Lex M. Cowsert
TITLE OF INVENTION: ANTISENSE MODULATION OF G-ALPHA-I2 EXPRESSION
FILE REFERENCE: RTS-0064
CURRENT APPLICATION NUMBER: US/09/339,993A
CURRENT FILING DATE: 1999-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; ORGANISM: Mycobacterium tuberculosis
; OTHER INFORMATION: H37Rv
US-09-103-840A-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUMBER OF SEQ ID NOS: 47
SEQ ID NO 1
LENGTH: 1664
TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 1, Application US/09339993A Patent No. 6040179
    APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME/KEY: CDS
LOCATION: (78)..(1145)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1368 CGTGGGAACCTGTCCAGTACTTCAACAACAAGATCATCTGTGACCTGGTAGAGGAGGAAGT 1427
                                                                                                                                                                                329 TGTCAAAGCCATGGGCAACCTGCAGATCGAC 359
                                                                                                                                                                                                   226 TGTCAATCCCTACCGAGACCTACAGATCTAC 256
                                                                                                                                                                                                                                     269 GGAATGCCGGCAGTACCGGGCGGTTGTCTACAGCAACACCATCCAGTCCATCATGGCCAT 328
                                                                                                                                                                                                                                                         166 CCTCCGGCGGCGGTTCCGGGAGAACCTCATTTATACCTACATCGGTCCTGTCCTAGTCTC 225
                                                                                                                                                                                                                                                                                                                    209
                                                                                                                                                                                                                                                                                                                           106 AGGGGTGCAGGACTTTGTCCTGCTGGAGAATTTCACCAGTGAGGCTGCCTTCATTGAGAA 165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1488 TGACCTTTCTGGAGAAGGTTGGAGGACACTGTCAAGC 1523
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1428 TCAAGGGCATCATCTCCATCTTGGATGAAGAGTGCCTGCGTCCTGGGGAGGCCACGGACC 1487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Match 1.1%;
Local Similarity 53.2%;
nes 83; Conservative
                                                                                                                                                                                                                                                                                                 AGGAAGAGCACCATCGTCAAGCAGATGAAGATCATCCACGAGGATGGCTACTCCGAGGA 268
    Nye,
Carr,
                            Warren, Gregory W
Koziel, Michael G
Mullins, Martha A
, Gordon J
r, Brian
                                                                                                                                                                                                                                                                                                                                                                                       1.1%;
                                                                                                                                                                                                                                                                                                                                                                        Score 39; DB 3;
Pred. No. 0.91;
0; Mismatches 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 39.2; DB Pred. No. 32; 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                 70;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             73;
                                                                                                                                                                                                                                                                                                                                                                                                 Length 1664;
                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 4411529;
                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0,
```

```
γ
                                                                           QΥ
                                                                                                         DЬ
                                                                                                                                    ρy
                                                                                                                                                                  Db
                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                US-08-471-033-24
                                                                                                                                                                                                                                                                                  Matches 174;
                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELEFAX: 919-541-8689
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                 1430
                                                                                                            1310 CTCTTCATCGAGCTGACTCTCAAGTCGGAGCAGGAGGAATACGAGGCTGAGGGCATCGCG 1369
                                                                                                                                                                     1250 TITCAGCATAACAGCTTCGAGCAGTTCTGCATCAACTACTGCAATGAGAAGCTGCAGCAG 1309
                                                                                                                                                                                                                                     1190 AGCCCCAGCTGGCGAAGCACCACGGTTCTTGGGCTTCCTGGACATTTACGGCTTTGAAGTG 1249
                              265 ACCGAGAAGGCCAAGATGAACAACTTCCTGGACAACAAGAACGACGACATCAAGACCAACTAC 324
                                                                                       205 GACAAGGAGAAGGCCAAGGAGTGGGGGCAAGGAAGGAGAAGGAGTGGAAGCTTACCGCC 264
                                                                                                                                                                  145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELECOMMUNICATION INFORMATION:
TELEPHONE: 919-541-8582
                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: US 0
FILING DATE: 25-MAR-1993
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Desal, Nair...

APPLICANT: Kostichka, N. Kristy
APPLICANT: Duck, Nicholas B
APPLICANT: Estruch, Juan J
TITLE OF INVENTION: No. 5770696el Pesticidal Proteins
                                                                                                                                                                                                                                                                                                                                                                                                                                     MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE: 23-MAR-1994
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CURRENT APPLICATION DATA: APPLICATION NUMBER: US
                                                                                                                                                                                                                            85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                          OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                       NAME/KEY: misc_feature LOCATION: 1..1386
                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEPHONE: 919-541-8689
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAME: Pace, Gary M.
REGISTRATION NUMBER: P.,
REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                   TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: FILING DATE: 23-MAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER: IBM PC (
OPERATING SYSTEM:
AAGGGCATCATCTCCATCTTGGATGAAGAGTGCCTGCGTCCTGGGGGAGGCCACGGACCTG 1489
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOFTWARE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDIUM TYPE:
                                                         TGGGAACCTGTCCAGTACTTCAACAACAAGATCATCTGTGACCTGGTAGAGGAGAAGTTC 1429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CITY: Hawthorne
                                                                                                                                                  AGCAAGTACACCAACCTCCAGAACCTGAAGATCACCGACAAGGTGGAGGACTTCAAGGAG
                                                                                                                                                                                                            AGCATCAGCCTGCTGAACAACGAGGTGATCAAGGCCGAGCAGCTGAACATCAACAGCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RY: USA
10532
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ΝY
                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1399 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       7 Skyline Drive
                                                                                                                                                                                                                                                                                                                                                                                                                                                   linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PatentIn Release #1.0, Version #1.30B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              E: Floppy disk
IBM PC compatible
SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                   DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1UMBER: US 08/037,057
25-MAR-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               09-SEP-1994
                                                                                                                                                                                                                                                                                            1.18;
                                                                                                                                                                                                                                                                                                                                                                                                                                (genomic)
                                                                                                                                                                                                                                                                                                                                               /note= "Maize optimized DNA sequence for VIP2A(a) protein from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US 08/218,018
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US 08/314,594
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             P-40,403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US/08/471,033
                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                        Score 38.6; DB 1; Length 1399;
Pred. No. 1.1;
0; Mismatches 199; Indels 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1695/CIP3/DIV7 - SQLv3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             and
                                                                                                                                                                                                                                                                        σ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Strains
                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                            144
                                                                                                                                                    204
                                                                                                                                                                                                                                                                     1,
```

Ş

1490

밁

325

AAGGAGATCACCTTCAGCATGGCCGGCAGCTTCGAG-----GACGAGATCAAGGACCTG

378

ACCTTTCTGGAGAAGTTGGAGGACACTGTCAAGCCCCACCCTCACTTCCTGACGCACAAG 1549

```
Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 15
US-08-471-044-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Patent No. 5840868
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 24,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
                                                                                                                                              TELEFAX: 919-541-8689
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Estruch, Juan J
TITLE OF INVENTION: NO. 5840868el Pesticidal Proteins and Strains
NUMBER OF SEQUENCES: 50
CORRESPONDENCE ADDRESS:
ADDRESSEE: CIBA-GEIGY Corporation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                          NAME: PACE, GATY M.
REGISTRATION NUMBER: 40,403
REFERENCE/DOCKET NUMBER: CGC
TELECOMMUNICATION INFORMATION:
TELEPHONE: 919-541-8582
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30B
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08
FILING DATE: 05-JUN-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1550 CTCGCTGACCAGAAGACCA 1568
                                                                                                                                                                                                                                                                                                                                                           PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE: 05-JUN-
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER READABLE FORM:
                                                                                                                               SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                              FILING DATE: 25-MAR-1993 ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STREET: / CTTY: Hawthorne
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   439
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COUNTRY: U
ZIP: 10532
                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: US 08/218,018 FILING DATE: 23-MAR-1994
                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: US 08/314,594 FILING DATE: 09-SEP-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ADDRESSEE: CIDA COMPANDENT: 7 Skyline Drive
                 NAME/KEY:
                                                               TOPOLOGY:
                                                                             STRANDEDNESS:
                                                                                                                                                                                                                                                                                                APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDIUM TYPE:
LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AACGTGGAGCCCACCACCA 457
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAGGAGATCGACAAGATGTTCGACAAGACCAACCTGAGCAACAGCATCATCACCTACAAG 438
                                                                           nucleic acid
DEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Application US/08471044
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Warren, Gregory W
Koziel, Michael G
Mullins, Martha A
Nye, Gordon J
                                                                                                                 1399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Kostichka, N. Kristy
Duck, Nicholas B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Desai, Nalini M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Carr, Brian
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           E: Floppy disk
IBM PC compatible
SYSTEM: PC-DOS/MS-DOS
misc_feature
1..1386
                                                             linear
                                                                                                                                                                                                                                                                                 NUMBER: US 08/037,057
25-MAR-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  06-JUN-1995
                                              DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                               US 08/463,483
                                                                                                                                                24:
                                                                                                                                                                                                              CGC 1695/CIP3/DIV6 -
```

; OTHER INFORMATION: ; OTHER INFORMATION: US-08-471-044-24 Qy Ş δÃ DЬ Qy В δÃ B QΥ Ър QΥ Вb 밁 Search completed: December Job time: 12768 secs Hest Local Similarity 45.98; Matches 174; Conservative 1490 1430 AAGGGCATCATCTCCATCTTGGATGAAGAGTGCCTGCGTCCTGGGGAGGCCACGGACCTG 1489 1310 CTCTTCATCGAGCTGACTCTCAAGTCGGAGCAGGAGGGAATACGAGGCTGAGGCCATCGCG 1369 1190 AGCCCCAGCTGGCGAAGCACCACGGTTCTTGGGCCTCCTGGACATTTACGGCTTTGAAGTG 1249 1370 TGGGAACCTGTCCAGTACTTCAACAACAAGATCATCTGTGACCTGGTAGAGGAGAAGTTC 1429 1550 CTCGCTGACCAGAAGACCA 1568 1250 TTTCAGCATAACAGCTTCGAGCAGTTCTGCATCAACTACTGCAATGAGAAGCTGCAGCAG 1309 439 379 325 265 ACCGAGAAGGGCAAGATGAACAACTTCCTGGACAACAAGAACGACCAACAAGACCAACTAC 324 145 85 AGCATCAGCCTGCTGAACAACGAGGTGATCAAGGCCGAGCAGCTGAACATCAACAGCCAG 144 AAGGAGATCACCTTCAGCATGGCCGGCAGCTTCGAG-----GACGAGATCAAGGACCTG AGCAAGTACACCAACCTCCAGAACCTGAAGATCACCGACAAGGTGGAGGACTTCAAGGAG 204 AACGTGGAGCCCACCACCA 457 ACCTTTCTGGAGAAGTTGGAGGACACTGTCAAGCCCCACCCTCACTTCCTGACGCACAAG 1549 AAGGAGATCGACAAGATGTTCGACAAGACCAACCTGAGCAACAGCATCATCACCTACAAG /note= "Maize optimized DNA
sequence for VIP2A(a) protein from AB78" 9 2002, 0, Score 38.6; Pred. No. 1 Mismatches 18:43:28 DB 2; 199; Length 1399; Indels 6; Gaps 438 378 بر

• •					
· ,					
				·	
				,	
•					
					•
		••			
			ut		
			•		
			ı		

```
Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Minimum DB
Maximum DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
       Score
                                                                                                                                                                                                                                                                                                                                                                                                     342.4
305.2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       seg length: 0 seg length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4:
5::
6::
7::
8::
9::
11::
11::
11::
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      IDENTITY_NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 December 9, 2002, 14:35:51; Search time 109 Seconds (without alignments) 13096.732 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-09-893-371-3
3661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Match Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        350425 seqs, 194966369 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Published_Applications_NA: *
       /cgn2_6/ptodata/2/pubpna/US06_NEW_PUB.seq:*
/cgn2_6/ptodata/2/pubpna/US06_PUBCOMB.seq:*
/cgn2_6/ptodata/2/pubpna/US06_PUBCOMB.seq:*
/cgn2_6/ptodata/2/pubpna/US08_NEW_PUB.seq:*
/cgn2_6/ptodata/2/pubpna/US08_NEW_PUB.seq:*
/cgn2_6/ptodata/2/pubpna/US08_NEW_PUB.seq:*
/cgn2_6/ptodata/2/pubpna/US09_NEW_PUB.seq:*
/cgn2_6/ptodata/2/pubpna/US09_NEW_PUB.seq:*
0: /cgn2_6/ptodata/2/pubpna/US09_PUBCOMB.seq:*
0: /cgn2_6/ptodata/2/pubpna/US10_PUBCOMB.seq:*
0: /cgn2_6/ptodata/2/pubpna/US10_PUBCOMB.seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ggagcgggggcgccgggtccg.....ccacctgcaccttttagcca 3661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GenCore version 5.1.3 Copyright (c) 1993 - 2002 Compugen Ltd
                                                                                                                                                                         79299892
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /cgn2_6/ptodata/2/pubpna/PCT_N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /cgn2_6/ptodata/2/pubpna/US60_PUBCOMB.seq:*
       145831
145831
                                                                           7465
11712
3632
7596
3048
3048
457
3501
736
2339
22339
8473
8673
3600
3600
3600
       12
10
10
10
10
10
10
10
10
10
10
                        US-09-880-107-3357
US-10-044-090-588
US-10-044-090-588
US-10-044-090-588
US-09-954-456-2215
US-09-954-456-2215
US-09-928-842A-997
US-09-938-842A-997
US-09-938-842A-977
US-09-938-842A-977
US-09-938-933-975-1025
US-09-851-682A-2
US-09-851-682A-2
US-09-851-682A-2
US-09-851-682A-2
US-09-851-682A-2
US-09-851-682A-2
US-09-851-682A-2
US-09-851-78-945
US-09-818-343-787
US-09-818-343-787
US-09-818-343-787
US-09-818-343-787
US-09-818-343-787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ij
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 7_PUBCOMB.seq:*
_NEW_PUB.seq:*
Sequence 3357, Apsequence 543, App Sequence 588, App Sequence 2215, Ap Sequence 726, App Sequence 777, App Sequence 171, App Sequence 1025, Ap Sequence 1025, Ap Sequence 340, App Sequence 340, App Sequence 945, App Sequence 945, App Sequence 638, App Sequence 638, App Sequence 638, App Sequence 644, App Sequence 674, App Sequence 79, App Sequence 674, App Sequence 674, App Sequence 674, App Sequence 674, App Sequence 79, App Sequence 79, App Sequence 79, App Sequence 674, App Sequence 79, App Sequence 79, App Sequence 79, App Sequence 79, App Sequence 2116, App
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Description
```

	000		000	a	O
44 45 45	41 42	36 38 39	33333	27 28 30 31	20 21 22 23 24
41.6 40.6 40.2	43.2 43 43	4 4 4 4 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	50.2 45.6	52.8 52.2	71.6 70.2 66.4 63.4
111	1.2		1.4	11.6	2.0 1.9 1.8 1.8
2451 1702 3951	311 311	307 479 578 4701	8117 90 568 175	432 432 491 491 583 2953	558 188 574 30013 233
10 10 9	10	10	100	100110	10010
US-09-815-242-9849 US-09-880-107-3680 US-09-712-363-31	US-09-864-761-23022 US-09-864-761-17687 US-09-864-761-25016	-09-864 -09-864 -09-864	-09-866-108- -09-864-761- -09-864-761-	-09-864-761 -09-864-761 -09-728-446 -09-864-761 -09-866-108	US-09-864-761-6878 US-09-864-761-23611 US-09-864-761-14865 US-09-764-877-3297 US-09-764-877-3297 US-09-864-761-32388
Sequence 9849, Ap Sequence 3680, Ap Sequence 31, Appl	Sequence 23022, A Sequence 17687, A Sequence 25016, A			12 31 13 2,	` ¬` ` >>

ALIGNMENTS

Дb Qy Вþ Qy ; OTHER INFORMATION: Genbank Accession No. US20020142981A1 U39226 US-09-880-107-3357 SOFTWARE: PatentIn Ver. 2.1
SEO ID NO 3357
LENGTH: 7465
TYPE: DNA
ORGANISM: Homo sapiens
FEATURE: RESULT 1
US-09-80-107-3357
; Sequence 3357, Application US/09880107
; Patent No. US20020142981A1
; GENERAL INFORMATION: Query Match Best Local S APPLICANT: Vockley, Joseph (
APPLICANT: Vockley, Joseph (
APPLICANT: Scherf, Uwe
APPLICANT: Gene Logic, Inc. Matches TITLE OF INVENTION: Gene Expression Profiles in Liver Cancer FILE REFERENCE: 44921-5028-W0 CURRENT EPLICATION NUMBER: US/09/880,107 CURRENT FILING DATE: 2001-06-14 PRIOR APPLICATION NUMBER: US 60/211,379 PRIOR TILING DATE: 2000-06-14 PRIOR PRIOR DATE: 2000-06-14 PRIOR PRIOR DATE: 2000-06-14 PRIOR PRIOR DATE: 2000-10-02 NUMBER: US 60/237,054 PRIOR FILING DATE: 2000-10-02 NUMBER: OF SEQ. ID. NOS: 3950 167 Local Similarity hes 1129; Conserv GTGAACCCCTACCAGCTGCTCTCCATCTACTCGCCAGAGCACATCCGCCAGTATACCAAC GTCAATCCCTACCGAGACCTACAGATCTACAGCCGGCAGCATATGGAACGCTACCGTGGT CTCCGGCGGTTCCGGGAGAACCTCATTTATACCTACATCGGTCCTGTCCTAGTCTCT 226 CTGCTTATCCGCTACCGGGACCACCTCATCTACACGTATACGGGCTCCATCCTGGTGGCT Conservative Joseph G. 9.4%; 0; Score 342.4; DB 10; Length 7465; Pred. No. 5.1e-88; Mismatches 1011; 70; Gaps 584

11;

,1

```
В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ф
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ő
              1650
                                                                                                                                                                                                                                                     1413
                                                                                                                                                                                                                                                                                                             1353
                                                                                                                                                                                                                                                                                                                                                                       1293
                                                                                                                                                                                                                                                                                                                                                                                                                                1233
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1113
                                                                                                                                                                                                                                                                                                                                          998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1056
                                                                                                                                                                                                                                                                                                                                                                                                  947
                                                                                                                                                                                                                                                                                                                                                                                                                                                              887
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        827
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               767
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 587 GACTTCAAGGGTGCCCCCGTGGGAAGGCCACATTCTCAGTTACCTCCTGGAAAAGTCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               467
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       407
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    705
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                347
CACCTGCAGCAGTTCTTTGTGCGGCACGTGTTCAAGCTGGAGCAGGAGGAATATGACCTG
                 AAGCTGCAGCAGCTCTTCATCGAGCTGACTCTCAAGTCGGAGGAGGAGGAGGAATACGAGGCT
                                                          GGGTTTGAGAACTTTGCTGTGAACAGCTTTGAGCAGCTCTGCATCAACTTCGCCAATGAG
                                                                           GGCTTTGAAGTGTTTCAGCATAACAGCTTCGAGCAGTTCTGCATCAACTACTGCAATGAG
                                                                                                                  CCTCCCTCCCAGGATGTGAAGAACTCTCGCAGGTCCA---TCGGCCTCCTGGACATCTTT
                                                                                                                                               AAGGACGCTGAGAGCCCCAGCTGGCGAAGCACCACGGTTCTTGGGCTCCTGGACATTTAC
                                                                                                                                                                           GGGATCTACGGGCGGCTGTTCGTGTGGATTGTGGACAAGATCAACGCAGCAATTTACAAG
                                                                                                                                                                                            GCTGTGTACAGCCGGACATTCACCTGGCTGGTCAGAAAGATCAATAGGTCACTGGCCTCT 1177
                                                                                                                                                                                                                                     ACGGTGTCCACCCACTGAGCAGGGAACAGGCACTGGACGTGCGCGACGCCTTCGTAAAG
                                                                                                                                                                                                                                                              GAGCTCCTGAGCCCACTGAACCTTGAACAGGCGGCATATGCAAGGGATGCGCTTGCCAAG
                                                                                                                                                                                                                                                                                               GTGAACCCCCAGACCTGATGAGCTGCCTGACTAGCCGCACCCTCATCACCCGCGGGGAG
                                                                                                                                                                                                                                                                                                                                                                                    GCCCAGGTTACTGAGAACCAGCTCAAATATCTGACCA-----GGCTCCTTGGT
                                                                                                                                                                                                                                                                                                                GTGGAAGGTACAACACTTAGGGAAGCCCTGACCCACAGGGAAGATCATCGCCAAGGGGGAA 1057
                                                                                                                                                                                                                                                                                                                                                        CTGGATGCCTGTGAGGTTCTCTCTCCCCATCGCTGGCCACCAGCTGCATCCCTGGTGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                   ATCGTGGCCAGCGTCCTACATCTGGGCAACATCCACTTTGCTGACGACGAGGACAGCAAT
                                                                                                                                                                                                                                                                                                                                                                                                                  ATCCGCTCCGCCATGAAGGTGCTCATGTTCACTGACACCGAGAACTGGGGAGATCTCGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TTGGCCATGGGTAACTGCATAACCTGTGAGGGCCGGGTGGACAGCCAGGAGTACGCCAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CTGGTGAAGGGCCAGTGTGCCAAGGTCTCCTCCATCAACGACAAGAGTGACTGGAAGGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GTCTGTCGCCAGGCCCTGGATGAAAGGAACTACCACGTGTTCTACTGCATGCTGGAGGGT 1055
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATGAGGAAGGCGCTGTCCGTCATTGACTTCACTGAGGATGAAGTGGAGGACTTGCTCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATGAGTGAGGATCAGAAGAAGAAGCTGGGCCTTGGGCCAGGCCTCTGA---CTACAACTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GTGGTGCACCAAAATCACGGAGAGCGGAACTTCCACGTCTTTTACCAGGTACTGGAGGGG 706
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AACAAGCGGGGCGCCATCGAGGGCGCGAAGATTGAGCAGTACCTGCTGGAAAAGTCACGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GCCAAGACTCTCCGCAACGATAACTCCAGGCGGTTTGGAAAGTACATGGATGTGCAGTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CACTCGTGGATTGAGCAGCAGGTCTTGGAGGCCACCCCATTCTGGAAGCATTTGGGAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GCCAAGACCATCCGCAATGACAACTCAAGCCGTTTCGGAAAGTACATCGACATCCACTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGTGCCGCAGACCCCCCTCTTGCAGAGCAACCCCGTGTTAGAGGCCCTTTGGGAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACGGAGAGCACAAAGCTGATCCTGCAGTTCCTGGCAGCCATCAG-----TGGGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GTCAGTTTCTATGAAGTACCACCTCATTTGTTTGCAGTGGCTGACACTGTATACCGGGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACAGAGGCCACCAAGAGACTGCTCCAGTTCTATGCAGAGACCTGCCCAGCCCCTGAACGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATGAAACGCAACAGCCGAGACCAGTGCTGCATCATCAGTGGGGAATCTGGGGCCCGGGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1357
                                                                                                                    1589
                                                           1649
                                                                                                                                                                            1532
                                                                                                                                                                                                                                                                   1117
                                                                                                                                                                                                                                                                                               1412
                                                                                                                                                                                                                                                                                                                                                         1352
                                                                                                                                                                                                                                                                                                                                                                                                                    1292
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1112
                                                                                                                                                                                                                                                                                                                                                                                                                                                 946
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    826
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            646
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          935
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       586
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           466
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      875
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  526
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                815
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     406
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            346
```

```
Дb
                                                               DЬ
                                                                                        Qy
                                                                                                                   DЬ
                                                                                                                                            Qy
                                                                                                                                                                          DЪ
                                                                                                                                                                                                   QY
                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                       Qγ
                                                                                                                                                                                                                                                                                    DЬ
                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                        DЬ
                                                                                                                                                                                                                                                                                                                                                                Qy
                                                                                                                                                                                                                                                                                                                                                                                              Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                    Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                 DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        γ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DЪ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         γ
2580 GCTGCCACACTGATCCAGAGGCACTGGCGGGGTCACAACTGTAGGAAGAA
                        2245 TCAGCCATCTGTATCCAGTCATGGTGGCGTGGCACACTGGGCCGGAGGAA
                                                                                                                   2463
                                                                                                                                               2125
                                                                                                                                                                         2403
                                                                                                                                                                                                    2066
                                                                                                                                                                                                                              2343
                                                                                                                                                                                                                                                        2008
                                                                                                                                                                                                                                                                                    2283
                                                                                                                                                                                                                                                                                                              1948
                                                                                                                                                                                                                                                                                                                                        2223
                                                                                                                                                                                                                                                                                                                                                                   1888
                                                                                                                                                                                                                                                                                                                                                                                                                                                 2103
                                                                                                                                                                                                                                                                                                                                                                                             2163
                                                                                                                                                                                                                                                                                                                                                                                                                       1828
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2043
                                                                                                                                                                                                                                                                                                                                                                                                                                                             1770 -- CACCCAGTTCAAGATGAGCCTCCTGCAGCTCGTGGAGATCCTGAGGTCTAAGGAGCCT 1827
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1718 CAGTGCTTTGACAAGAGTGAGCAGTGACAAGAAGCGGCCAGGACGGTGGC------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1983
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1827
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1358
                                                    CTCCTTCAGAAAGTCATCCGGGGATTCAAAGACAGGTCTAACTTTCTGAAGCTGAAGAAC
                                                                           AAGATCCAGGCGGCCTGGAGGGGCTTTCATTGGCGACAGAAATTTCTCCGGGTGAAGCGA
                                                                                                        CACCATGACATGCTGCTGGAAGTGGAGCGGGACAAAGCCATCACCGACAG---AGTCATC
                                                                                                                                  CCCAAGACCTTATTTGCCACAGAGGACTCCCTGGAAGTCCGGCGGCAGAGTCTAGCCACC
                                                                                                                                                            GCTGTGCTGGGCACCCACGATGACTGGCAGATAGGCAAAAACCAAGATCTTTCTGAAGGAC
                                                                                                                                                                             ACCTCGGCTACAAGCCA-GAAGAGTACAAAATGGGCAGGACTAAGATCTTCATCCGATTC
                                                                                                                                                                                                                 GGTGTGAAGCCGGCCTACAAGCAGGGCGACCTCCGCGGGACTTGCCAGCGCATGGCTGAG
                                                                                                                                                                                                                                  GAGACATGGCC--CATGTGGGCAGGACGGCCCCAGGATGGTGTGGCCGTGTTGGTCAGAC
                                                                                                                                                                                                                                                                       GGCTACCCCATCCGCTACAGCTTCGTAGAGTTTGTGGAGCGGTACCGTGTGCTGCTGCCA
                                                                                                                                                                                                                                                                                        GGCTTTGCCTATCGTCGCAAATATGAGGCTTTCCTGCAGAGGTACAAGTCACTGTGCCCA
                                                                                                                                                                                                                                                                                                                           CTGTGCGTGCGCCAGCTGCGGTACTCAGGAATGATGGAGACCATCCGAATCCGCCGAGCT
                                                                                                                                                                                                                                                                                                                                             CTCATCCGACATCAGGTGAAGTACCTGGGGACTGATGGAGAATCTGCGCGGTGCGCAGAGCT
                                                                                                                                                                                                                                                                                                                                                                                GCCTATATCCGGTGCATCAAGCCAAACGACGCCAAGCAGCCGGGTCGCTTTGATGAGGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                    CAGATCTTCCAGGCCGATGTCGCCATGGGCGCGAGACCAGGAAGCGCTCGCCCACACTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GACACCCTGCATGGGGACATTATCCAGCTGGTCCACTCCTCCAGGAACAAGTTCATCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GACCTCCTCTTCCGGAACCTGAAGGAGACCATGTGCAGCTCAATGAACCCCATCATGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATCAACCATTTTGCAGGCATCGTCTACTATGAGACCCAAGGCTTCCTGGAGAAGAACCGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CTTCTGCATTATGCTGGAGAGGTGACCTACAGTGTGACTGGGTTTCTGGATAAAAACAAT 1657
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATCCCCCCAAGAACAACCATGAGA------CCCAGTTTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTGACGCACAAGCTTGACCAGAAGACCAGGAAATCCCTAGACCGAGGGGAGTTCCGC 1597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GCCACGGACCTGACCTTTCTGGAGAAGTTGGAGGACACTGTCAAGCCCCACCCTCACTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GAGGAGAAGTTCAAGGGCATCATCTCCATCTTGGATGAAGAGTGCCCTGCGTCCTGGGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGCACAGACACCACCATGTTACACAAGCTGAACTCCCAGCACAAGCTCAACGCCAACTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GCCAACAAGCCCATGAACATCATCTCCCTCATCGATGAGGAGGAGCAAGTTCCCCCA---AG
  2629
                                                                                                         2519
                                                                                                                                   2184
                                                                                                                                                            2462
                                                                                                                                                                                       2124
                                                                                                                                                                                                                  2402
                                                                                                                                                                                                                                           2065
                                                                                                                                                                                                                                                                       2342
                                                                                                                                                                                                                                                                                                  2007
                                                                                                                                                                                                                                                                                                                                                       1947
                                                                                                                                                                                                                                                                                                                             2282
                                                                                                                                                                                                                                                                                                                                                                                 2222
                                                                                                                                                                                                                                                                                                                                                                                                           1887
                                                                                                                                                                                                                                                                                                                                                                                                                                     2162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1769
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2042
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1982
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1886
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1826
```

RESULT 2
US-09-925-300-643

Sequence 643, Application US/09925300
Patent No. US20020151681A1
GENERAL INFORMATION:
APPLICANT: Craig Rosen,
APPLICANT: Steve Ruben
TITLE OF INVENTION: Nucleic Acids, Pro

Ş В δ В Š 망 Ş 밁 Š B Ωy Ъ Ş В Š g οy Ъ Qy

Acids, Proteins

and

Antibodies

```
FILE REFERENCE: PA101
CURRENT APPLICATION NUMBER: US/09/925,300
CURRENT FILING DATE: 2001-08-10
PRIOR APPLICATION NUMBER: PCT/US00/05988
PRIOR FILING DATE: 2000-03-08
PRIOR APPLICATION NUMBER: 60/124,270
PRIOR FILING DATE: 1999-03-12
NUMBER OF SEQ ID NOS: 1890
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 643
LENGTH: 1712
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; OTHER INFORMATION: n equals a,t,g, US-09-925-300-643
                                                                                                       δÃ
                                                                                                                                               밁
                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                         õ
                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                     õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
B
                                δÃ
                                                                        밁
                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                      Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity
Matches 668; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REATURE:
NAME/KEY: misc feature
LOCATION: (8)
OTHER INFORMATION: n equals a
NAME/KEY: misc feature
LOCATION: (1664)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1046 GCCAAGGGGAAGAGCTCCTGAGCCCACTGAACCTTGAACAGGGGCGGCATATGCAAGGGAT 1105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1226
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1106
                                                                                                                                                                                                                                                                                                                                                                                                          1406
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1166
                                                                                                                                                                                                                                                                                                                                  1466
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               430
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       265
                                                                                                                                                                                                                                                                                                                                                                  GAATACGAGGCTGAGGGCATCGCGTGGGAACCTGTCCAGTACTTCAACAACAAGATCATC 1405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TACTGCAATGAGAAGCTGCAGCAGCTCTTCATCGAGCTGACTCTCAAGTCGGAGCAGGAG 1345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GACCGAGGGGAGTTCCGCCTTCTGCATTATGCTGGAGAGGTGACCTACAGTGTGACTGGG
                                                                                                                                                                                                                                                         CACCCTCACTT ----- CCTGACGCACAAGCTCGCTGACCAGAAGACCAGGAAATCCCTA 1579
                                                                                                                                                                                                                                                                                                                                CGTCCTGGGGAGCCCACGGACCTGACCTTTCTGGAGAAGTTGGAGGACACTGTCAAGCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CTGGACATTTACGGCTTTGAAGTGTTTCAGCATAACAGCTTCGAGCAGTTCTGCATCAAC 1285
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GCCAAACAGGAGAAAGTTTCAACTACACTGAATGTGGCTCAGGCTTATTATGCCCCGTGAT 324
AGCCATGCCCTCATCAAGTCTTTGTTCCCCGAAGGGAATCCCGCCAAGATCAACCTGAAA
                                  ATGAACCCCATCATGGCCCAGTGCTTTGACAAGAGTGAGCTCAGTGACAAGAAGCGGCCA 1759
                                                                      TTCGTTGACAAAAACAATGACCTTMTCTATCGAGACCTGTCCCAAGCCATGTGGAAGGCC
                                                                                            TTTCTGGATAAAAACAATGACCTCCTCTTCCGGAACCTGAAGGAGACCATGTGCAGCTCA
                                                                                                                                               CCTCACAGCTGCTTCAGGATCCAGCATTATGCTGGAAAGGTGCTGTACCAGGTGGAAGGA 849
                                                                                                                                                                                                                      CACCAGCATTTTGAAAGCAGGATGAGCAAGTGCTCTCGGTTCCTCAATGACACGTCTCTG
                                                                                                                                                                                                                                                                                             AGACCTGGCACAGTCACTGATGAGACCTTCTTAGAAAAGCTGAACCAAGTATGTGCCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                           GAGTATATACGGGAGGWTATAGAATGGACTCACATTGACTACTTCAATAATGCTATCATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TATTGTAACGAAAAGCTGCAACAAATCTTCATTGAACTTACTCTTAAAGAAGAGCAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CTGGACATTTATGGCTTTGAGATTTTCGAGGACAACAGCTTTGAGCAGTTCATTATTAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      -----AAAGCATTAAGGCACAAACAAAAGTGAGAAAGAAGGTCATGGGTGTT 429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TCACTGGCCTCTAAGGACGCTGAGAGCCCCCAGCTGGCGAAGCACCACGGTTCTTGGGCTC 1225
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8.3%;
ilarity 55.3%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        a,t,g,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 305.2; DB 10;
Pred. No. 1.1e-77;
Pred. Mismatches 510;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ဝူ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 1712;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            28;
                                                                                                                                                                                                                                                                                                                                  1525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             489
969
                                                                      909
                                                                                                                                                                                                                      789
                                                                                                                                                                                                                                                                                                                                                                                                                                             609
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    549
```

w ••

```
APPLICANT: Olga Bandman
TITLE OF INVENTION: GENES DIFFERENTIALLY EXPRESSED IN
FILE REFERENCE: PA-0028 US
CURRENT APPLICATION NUMBER: US/10/044,090
CURRENT FILING DATE: 2002-01-09
NUMBER OF SEQ ID NOS: 850
SOFTWARE: PERL Program
SEQ ID NO 588
LENGTH: 3632
TYPE: DNA
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-10-044-090-588; Sequence 588, Application US/10044090
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          рь
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        д
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       QУ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Qy
                    δÃ
                                                             DЬ
                                                                                                Qy
                                                                                                                                       Дb
                                                                                                                                                                                                                                                                                                 ; NAME/KEY: misc_feature
; OTHER INFORMATION: Incyte ID
US-10-044-090-588
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Patent No. US20020137081A1 GENERAL INFORMATION:
                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                        Query Match 8.2%;
Best Local Similarity 56.8%;
                                                                                                                                                                                                                                                                                                                                                             FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1760
                      1325
                                                                                                                                                              1205 AGCACCACGGTTCTTGGGCTCCTGGACATTTACGGCTTTTGAAGTGTTTTCAGCATAACAGC 1264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1450
                                                                                                                                         124
ACTCTCAAGTCGGAGGAGGAGGAATACGAGGCTGAGGGCATCGCGTGGGAACCTGTCCAG 1384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CTAATGAA 1457
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TTCATCCGATTCCCCAAGACCTTATTTGCCACAGAGGACTCCCTGGAAGTCCGGCGGCAG 2172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CGCGTGCGCAGAGCTGGCCTATCGCCAAATATGAGGCTTTCCTGCAGAGGTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CAGACCAWGAAMCCAAACTATATTAGGTGTATCAAACCGAATGATAAAAAAAGCAGCACAC 1089
                                                                                                TTCGAGCAGTTCTGCATCAACTACTGCAATGAGAAGCTGCAGCAGCTCTTCATCGAGCTG 1324
                                                                                                                                       AGAAAGAAGGTCATGGGTGTTCTGGACATTTATGGCTTTGAGATTTTCGAGGACAACAGC 183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CGGGTGAA 2240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GTCCTATTTAATGAATTAGAAATTCCCGTGGAAGAATACTCCTTTGGTAGATCAAAGATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GTGTTGGTCAGACACCTCGGCTACAAGCCAGAAGAGTACAAAATGGGCAGGACTAAGATC 2112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CGAGTGCGGAGGGCAGGCTACGCCTTCAGGCAGGCCTATGAACCTTGCCTAGAAAGATAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CGCTTTGATGAGGTGCTCATCCGACATCAGGTGAAGTACCTGGGACTGATGGAGAATCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AGGTCTAAGGAGCCTGCCTATATCCGGTGCATCAAGCCAAACGACGCCAAGCAGCCGGGT 1872
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGGCCTCCTACAGCAGGCTCACAGTTCAAGGCATCCGTGGCCACTCTGATGAAAAACCTA 1029
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GG-----ACGGTGGCCACCCAGTTCAAGATGAGCCTCCTGCAGCTCGTGGAGATCCTG 1812
                                                         TTTGAGCAGTTCATTATTAATTATTGTAACGAAAAGCTGCAACAAATCTTCATTGAACTT 243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AGTCTAGCCACCAAGATCCAGGCGGCCTGGAGGGGCTTTCATTGGCGACAGAAATTTCTC 2232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TTCATCCGAAACCCCAAGAACATTATTCAAATTAGAAGACCTGAGGAAGCAACGCCTGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAGTCACTGTGCCCAGAGACATGGCCCATGTGGGCAGGACGGCCCCAGGATGGTGTGCCC
                                                                                                                                                                                                                     596;
                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                     0,
                                                                                                                                                                                                                                                                                                                      No. US20020137081A1 2131135CB1
                                                                                                                                                                                                                                      Score 299; DB 12;
Pred. No. 1.1e-75;
                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                     440;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        IN VASCULAR TISSUE ACTIVATION
                                                                                                                                                                                                                                                          Length 3632;
                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4
                                                                                                                                                                                                                     13;
                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1209
                                                                                                                                                                                                                     2
```

```
Sequence 2215, Application US/I
Patent No. US20020115057A1
GENERAL INFORMATION:
APPLICANT: Young, Paul
TITLE OF INVENTION: Sets
FILE REFERENCE: 689290-76
CURRENT APPLICATION NUMBER: U
                                                                                                                                        RESULT 4
US-09-954-456-2215
                                                                                                                                                                                                                 B
                                                                                                                                                                                                                                                õ
                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                δõ
                                                                                                                                                                                                                                                                                                                                                 DЬ
                                                                                                                                                                                                                                                                                                                                                                                õ
                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Вр
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ъ
                                                                                                                                                                                                       1144 AAATGCCGCACACACTTCCTGCTAATGAA 1172
                                                                                                                                                                                                                                                                                                                                                   1024
                                                                                                                                                                                                                                                                                                                                                                                                                                                   2032
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1912
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1972
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1852
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1619
                                                                                                                                                                                                                                                                                                                                                                                                                     964
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            484
                                                                                                                                                                                                                                       CATTGGCGACAGAAATTTCTCCGGGTGAA 2240
                                                                                                                                                                                                                                                                     CTGAGGAAGCAACGCCTGGAGGACTTGGCCCACTCTCATTCAGAAGATATATCGGGGGTGG
                                                                                                                                                                                                                                                                                                                                       TCCTTTGGTAGATCAAAGATATTCATCCGAAACCCAAGAACATTATTCAAATTAGAAGAC
                                                                                                                                                                                                                                                                                                                                                          AAAATGGGCAGGACTAAGATCTTCATCCGATTCCCCAAGACCTTATTTGCCACAGAGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                CGGCCCCAGGATGGTGTGGCCGTGTTGGTCAGACACCTCGGCTACAAGCCAGAAGAAGATAC
                                                                                                                                                                                                                                                                                                   TCCCTGGAAGTCCGGCGGCAGAGTCTAGCCACCAAGATCCAGGCGGCCTGGAGGGGCTTT
                                                                                                                                                                                                                                                                                                                                                                                                        CCAGCCAGGTCTGGTGTGGAGGTCCTATTTAATGAATTAGAAATTCCCGTGGAAGAATAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GAGGCTTTCCTGCAGAGGTACAAGTCACTGTGCCCAGAGACATGCCCCATGTGGGCAGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AACGACGCCAAGCAGCCGGGTCGCTTTGATGAGGTGCTCATCCGACATCAGGTGAAGTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CTGGGACTGATGGAGAATCTGCGCGTGCGCAAGAGCTGGCTTTGCCTATCGTCGCAAATAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CTCAGTGACAAGAAGCGGCCAGG-----ACGGTGGCCACCCAGTTCAAGATGAGCCTC 1791
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TCCCAAGCCATGTGGAAGGCCAGCCATGCCCTCATCAAGTCTTTGTTCCCCGAAGGAGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAGGAGACCATGTGCAGCTCAATGAACCCCCATCATGGCCCAGTGCTTTGACAAGAGTGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GTGACCTACAGTGTGACTGGGTTTCTGGATAAAAACAATGACCTCCTCTTTCCGGAACCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AATGATAAAAAAGCAGCACACATCTTCAACGAGGCTCTAGTGTGTCATCAGATCAGGTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GCCACTCTGATGAAAAACCTACAGACCAAGAACCCAAACTATATTAGGTGTATCAAACCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CCCGCCAAGATCAACCTGAAAAGGCCTCCTACAGCAGGCTCACAGTTCAAGGCATCCGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GTGCTGTACCAGGTGGAAGGATTCGTTGACAAAAACAATGACCTTCTCTATCGAGACCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TTCCTCAATGACACGTCTCTGCCTCACAGCTGCTTCAGGATCCAGCATTATGCTGGAAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CAGAAGACCAGGAAATCCCTAGACCGAGGGGGAGTTCCGCCTTCTGCATTATGCTGGAGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CTGAACCAAGTATGTGCCACCCACCAGCATTTTTGAAAGCAGGATGAGCAAGTGCTCTCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TTGGAGGACACTGTCAAGCCCCACGCTCACTT-----CCTGACGCACAAGCTCGCTGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATGCTGGATGAAGAGTGCCTCAGACCTGGCACAGTCACTGATGAGACCTTCTTAGAAAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATCTTGGATGAAGAGTGCCTGCGTCCTGGGGAGGCCACGGACCTGACCTTTCTGGAGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TACTTCAACAACAACATCTGTGACCTGGTAGAGGAGAAGTTCAAGGGCATCATCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TACTTCAATAATGCTATCATTTGTGACCTAATAGAAAATAACACAAATGGAATCCTGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACTCTTAAAGAAGAGCAGGAGGAGTATATACGGGAGGATATAGAATGGACTCACATTGAC
 NUMBER: US/09/954,456
                                                                                                                        US/09954456
                                                        for
                                          Identifying Anti-Cancer Therapeutic Agents Using
                                                                                                                                                                                                                                                                                                       2211
                                                                                                                                                                                                                                                                                                                                                                                                        1023
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2031
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1971
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1911
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          903
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          843
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          783
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1678
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            723
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1618
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1558
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   363
                                              Canc
                                          Ω
                                                                            밁
                                                                                                        Qy
                                                                                                                                              DЬ
                                                                                                                                                                            Qy
                                                                                                                                                                                                                                              δÃ
                                                                                                                                                                                                                DЬ
                                                                                                                                                                                                                                                                                   Вþ
                                                                                                                                                                                                                                                                                                                Qγ
                                                                                                                                                                                                                                                                                                                                                 DЬ
                                                                                                                                                                                                                                                                                                                                                                                Qy
                                                                                                                                                                                                                                                                                                                                                                                                                     Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                 200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; TYPE: DNA
; ORGANISM: HOMO
US-09-954-456-2215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CURRENT FILING DATE: 2001-09-18
PRIOR APPLICATION NUMBER: US/60/233,617
PRIOR APPLICATION NUMBER: US/60/234,052
PRIOR APPLICATION NUMBER: US/60/234,952
PRIOR APPLICATION NUMBER: US/60/234,952
PRIOR APPLICATION NUMBER: US/60/234,923
PRIOR FILING DATE: 2000-09-25
PRIOR APPLICATION NUMBER: US/60/235,134
PRIOR FILING DATE: 2000-09-25
PRIOR APPLICATION NUMBER: US/60/235,637
PRIOR FILING DATE: 2000-09-26
PRIOR PRIOR PRIOR NUMBER: US/60/235,638
PRIOR FILING DATE: 2000-09-26
PRIOR APPLICATION NUMBER: US/60/235,711
PRIOR APPLICATION NUMBER: US/60/235,711
PRIOR APPLICATION NUMBER: US/60/235,711
PRIOR APPLICATION NUMBER: US/60/235,720
PRIOR FILING DATE: 2000-09-27
PRIOR FILING DATE: 2000-09-27
PRIOR FILING DATE: 2000-09-27
PRIOR FILING DATE: 2000-09-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUMBER OF SEQ ID NOS: 2276
SOFTWARE: PatentIn version 3.0
SEQ ID NO 2215
LENGTH: 7596
TYPE: DMA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity
Matches 647; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR APPLICATION NUMBER: US/60/235,863 PRIOR FILING DATE: 2000-09-27
898 TCAAGCAAAAGATGAACGTACTTTTCATATCTTTTACCAGTTGTT--ATCTGGAGCAGGA
                                                                            838
                                                                                                                                              778
                                                                                                                                                                                535
                                                                                                                                                                                                                718
                                                                                                                                                                                                                                                 475
                                                                                                                                                                                                                                                                                 658
                                                                                                                                                                                                                                                                                                                 433
                                                                                                                                                                                                                                                                                                                                                   598
                                                                                                                                                                                                                                                                                                                                                                                                                     538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        358 GACATGCTTGAATGAAGCTTCCGTTTTACATAATCTGAAGGATCGCTACTATTCAGGACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TGTGAAAAATGATAACTCATCTCGTTTTGGCAAATTTATTCGGATCAACTTTGATGTAAC
                                                                                                                                                       TCTCCGCAACGATAACTCCAGCCGGTTTGGAAAGTACATGGATGTGCAGTTTGACTTCAA
                                                                                                                                                                                                   ACTTGAACGGCAGCTTTTGCAAGCAAATCCAATTCTCGAATCATTTGGAAATGCGAAGAC
                                                                                                                                                                                                                                                                     TTTGTTTGCAGTGGCTGACACTGTATACCGGGCACTTCGTACTGAGCGTCGGGACCAGGC
                                                                                                                                                                                                                       AGTGCGAGACCGCTGTTGCAGAGCAACCCCGTGTTAGAGGCCTTTGGGAATGCCAAGAC
                                                                                                                                                                                                                                                                                                        GTTCTATGCAGAGACCTGCCCAGCCCCTGAACGGGG----
                                                                                                                                                                                                                                                                                                                                       CATCTATGCTATATCTGAATCTGCTTACAGATGCATGCTTCAAGATCGTGAGGACCAGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TTACTCTGAGAATATTATTGAAATGTACAGAGGGAAGAAGCGTCATGAGATGCCTCCACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CTACAGCCGGCAGCATATGGAACGCTACCGTGGTGTTCTATGAAGTACCACCTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AATCTATACTTATTCTGGACTCTTCTGTGTAGTTATAAACCCTTACAAGAATCTTCCAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CATTTATACCTACATCGGTCCTGTCCTAGTCTGTCAATCCCTACCGAGAGCCTACAGAT 252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5.3%;
50.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 192.8; DB 10;
Pred. No. 8.3e-45;
0; Mismatches 587;
                                                                                                                                                                                                                                                                                                        -----TGGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          42;
```

Gaps

6

417

8.97 654 594

777 534 717

474

597 372 537

• •

Ψ

```
US-10-044-303-3
                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         д
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                      US-10-044-303-3
                                                                                                                                                   TITLE OF INVENTION: Protein expression and structure TITLE OF INVENTION: Specific fusion vectors FILE REFERENCE: ST010209-EPA CURRENT APPLICATION NUMBER: US/10/044,303 CURRENT FILING DATE: 2002-01-11 NUMBER OF SEQ ID NOS: 3 SOFTWARE: PATENTIN VET. 2.1 SEQ ID NO 3 LENGTH: 3048
                                                                                                                                                                                                                                                                                                                                                    Sequence 3, Application US/10044303 Patent No. US20020137161A1
Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                     GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                   APPLICANT: Max-Planck-Gesellschaft e.V.
                                                             ORGANISM: Artificial Sequence
FEATURE:
OTHER INFORMATION: Description of Artificial Sequence: DNA
OTHER INFORMATION: coding for recombinant protein M761-2R F
                                                                                                                                            TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1012
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1072
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1015
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           956
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AGCAATGCACATAATGGGCTTCTCCCCATGAAGGATTCTGTCAATGCTTAAAGTAGTATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GGCGCTGTCCGTCATTGACTTCACTGAGGATGAAGTGGAGGACTTGCTCAGCATCGTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGGCCAGTGTGCCAAGGTCTCCCTCCATCAACGACAAGAGTGACTGGAAGGTTATGAGGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                             GAACTTCATCGATTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GGAACCTGTCCAGTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GTTCAACCACCATGTTTATCCTAGAACAAGAGGAATACCAGCGCGAAGGCATCGAGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CTTCATCGAGCTGACTCTCAAGTCGGAGCAGGAGGAATACGAGGCTGAGGGCATCGCGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GACCAAACGTCAGGGAGCATCTTTCATTGGAATCCTGGATATTGCTGGATTTGAAAATTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CCCCAGCTGGCGAAGCACCACGGTTCTTGGGCTCCTGGACATTTACGGCTTTTGAAGTGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GACATTCACCTGGCTGGTCAGAAAGATCAATAGGTCACTGGCCTCTAAGGACGCTGAGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CCAGACCAAAGAACAGGCAGATTTTGCAGTAGAAGCATTGGCAAAAGCTACCTATGAGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACTGAACCTTGAACAGGCGCATATGCAAGGGATGCGCTTGCCAAGGCTGTGTACAGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GTTTACTCGGGCCATCCTGACTCCCCGGGATCAAGGTCGGCCGAGACTATGTGCAAAAAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACTTAGGGAAGCCCTGACCCACAGGAAGATCATCGCCAAGGGGGGAAGAGCTCCTGAGCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CATGCCAGAAAATACAGTTGCGCAGAAGCTCTGCCATCTTCTTGGGATGAATGTGATGGA 1251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TACTACTGAGAACCAGCTCA---AATATCTGACCAGGCTCCTTGGTGTGGAAGGTACAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TTCAGTGCTACAGTTTGGAAATATTTCTTTCAAAAAGGAGAGAAATACTGATCAAGCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CAGCGTCCTACATCTGGGCAACATCCACTTTGCTGACGACGACGACAACGCAATGCCCAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGGCTATATTCCTA---TTCCGGGACAGCAAGACAAGATAATTTCCAGGAGACCATGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GAACACCTAAAGTCTGATTTGCTTCTTGAAGGATTT-AATAACTACAGGTTTCTCTCCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GGAGACTCTCCGTCGGCTGGGCTTGGAACCGGAACCCCCAGAGCTACTTGTACCTGGTGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GCTCTTTCGCTGGCTCGTTCATCGCATCAATAAAGCTCTG-------
5.2%;
49.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1387
                                                                                                                                                                                                                                                                                                                                                                                                                                                             1612
Score 192; DB 12; Pred. No. 7.6e-45;
                Length
                                                                                                                                                                                                                                                                                                   solution
                                                                     R238E
                                                                                                                                                                                                                                                                                                   using
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -GATAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1596
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1371
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1071
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1011
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1014
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1536
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1476
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1416
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1371
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   894
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1071
```

```
Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                       δÃ
                                                                         δÃ
                                                                                                      멍
                                                                                                                           QΥ
                                                                                                                                                        DЪ
                                                                                                                                                                                 Ş
                                                                                                                                                                                                            망
                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                       δÃ
                                                                                                                                                                                                                                                                                                                 DЪ
                                                                                                                                                                                                                                                                                                                                           δÃ
                                                                                                                                                                                                                                                                                                                                                                    Вþ
                                                                                                                                                                                                                                                                                                                                                                                            Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                              QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ρy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
1315
                                                                                                      1195
                                                                            1091
                                                                                                                                1031
                                                                                                                                                                                                            1075
                                                                                                                                                                                                                                                              1015
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 377
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             418
                                                                                                                                                                                                                                                                                                                   955
                                                                                                                                                                                                                                                                                                                                            791
                                                                                                                                                                                                                                                                                                                                                                      898
                                                                                                                                                                                                                                                                                                                                                                                              731
                                                                                                                                                                                                                                                                                                                                                                                                                        838
                                                                                                                                                                                                                                                                                                                                                                                                                                                 671
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         778
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   611
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       551
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 658
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           491
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         197
                                                                                                                                                                                                                                                             ATGATTTCTGGAGAGAGTGGGGCAGGCAGGAGAGGCCACCAAGAGAGTCCCAGTTC
AAAAAGATCAACAATGTCCTCTGTCAAGAGA - -
             AGAAAGATCAATAGGTCACTGGCCTCTAAGGACGCTGAGAGCCCCCAGCTGGCGAAGCACC
                                                 CTCAAATATCTGACCAGGCTCCTTGGTGTGGAAGGTACAACACTTAGGGAAGCCCTGACC 1030
                                                                                                                                                                                                                         GGCAACATCCACTTTGCTGCTGACGAGGACAGCAATGCCCAGGTTACTACTGAGAACCAG
                                                                                                                                                                                                                                                                                                                                           GTCTCCTCCATCAACGACAAGAGTGACTGGAAGGTTATGAGGAAGGCGCTGTCCGTCATT 850
                                                                                                                                                                                                                                                                                                                                                                                              CTGGGCTTGGAACGGAACCCCCAGAGCTACTTGTACCTGGTGAAGGGCCCAGTGTGCCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                       TCCAGCCGGTTTGGAAAGTACATGGATGTGCAGTTTGACTTCAAGGGTGCCCCCGTGGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CTTGCATCTGTCGCTGGTCGTAATCAAGCCAATGGTAGTGGTATTGGAACAACAAATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TATGCAGAGACCTGCCCAGCCCCTGAA-----CGGGGTTGCGCAGTGCGAGACCGCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TTAATCACTGGTGAATCTGGTGCTGGTAAGACTGAAAAACACCAAAAAAGGTCATTCAATAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TTTGCAGTGGCTGACACTGTATACCGGGCACTTCGTACTGAGCGTCGGGACCAGGCAGTG 376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACTCAAGAGATGGTTGATATCTTCAAAGGTCGTAGAAGAAATGAAGTTGCCCCACATATT 477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGCCGGCAGCATATGGAACGCTACCGTGGTGTCAGTTTCTATGAAGTACCACCTCATTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TACACCTATTCAGGTCTCTTTTTGGTTGCCGTCAATCCATTCAAGAGAATTTCGAATCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TATACCTACATCGGTCCTGTCCTAGTCTCTGTCAATCCCTACCGAGACCTACAGATCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TACCTCAATGAACCAGCAGTTTTCCACAATCTCCGTGTTCGTTACAATCAAGATTTAATT 357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TTCACCAGTGAGGCTGCCTTCATTGAGAACCTCCGGGCGGCGGTTCCGGGAGAACCTCATT
                                                                          GAACCACGTATTTTAGCCGGTCGTGATTTAGTTGCTCAACATCTCAACGTTGAAAAATCC
                                                                                                                             CACAGGAAGATCATCGCCAAGGGGGAAGAGCTCCTGAGCCCACTGAACCTTGAACAGGCG
                                                                                                                                                                                                          GGTAACATCAAATTCGAAAAAGGTGCTGGTGAAGGTGCTGTCCTCAAAGACAAAACCGCC
                                                                                                                                                                                                                                                                                                                  ATCAAAGGTGTCTCTGATAGTGAAGAATTCAAAATCACTCGTCAAGCTATGGACATTGTT 101
                                                                                                                                                        CTCAACGCTGCTTCAACCGTCTTTGGTGTCAATCCATCAGTCCTTGAAAAGGCTCTCATG
                                                                                                                                                                                                                                                                                                                                                                      CTTCACTTGGCTGGT - - - CCAGAATCATTCAACTACTTAAATCAAAGTGGTTGTGTTGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      612;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      600;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
 GAAAAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                         1210
                                                  1314
                                                                                                                              1090
                                                                                                                                                                                                                                                                                                                                                                      954
                                                                                                                                                                                                                                                                                                                                                                                                                        897
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   670
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       610
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        550
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              490
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4.17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             777
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     657
```

```
APPLICANT: Triedrich, Glenn
APPLICANT: Zambrowicz, Brian
APPLICANT: Sands, Arthur T.
TITLE OF INVENTION: No. US20020102543A1e1 Mutated Mammalian Cells and
TITLE OF INVENTION: No. US20020102543A1e1 Mutated Mammalian Cells and
TITLE OF INVENTION: No. US20020102543A1e1 Mutated Mammalian Cells and
TITLE OF INVENTION: No. US20020102543A1e1 Mutated Mammalian Cells and
TITLE OF INVENTION: Animals

CURRENT APPLICATION NUMBER: US,09/728,445
CURRENT APPLICATION NUMBER: US,60/168,358
PRIOR APPLICATION NUMBER: US,60/168,358
VUMBER OF SEQ ID NOS: 891
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 726
LENGTH: 457
TYPE: DNA
OBSANTSM: Miss misscullis
                                  Š
                                                                   В
                                                                                            Š
                                                                                                                            ДЪ
                                                                                                                                                      Š
                                                                                                                                                                                      밁
                                                                                                                                                                                                            5
                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                      á
                                                                                                                                                                                                                                                                                                       рь
                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               : LOCATION: (1)...(457)

: OTHER INFORMATION: n = A,T,C or

US-09-728-445-726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-09-728-445-726; Sequence 726, A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           õ
                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                        Matches 286;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 726, Application US/09728445
Patent No. US20020102543A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NAME/KEY: misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURE:
         361
                                     396
                                                                 301
                                                                     343 GCCACTTCGTACTGAGC--GTCGGGACCAGGCAGTGATTT-----CTGGAGAGAGTG
                                                                                                             241 NNAGTANNNTANGACNGTNCCANCCTCATTTNGTTNGCACNGGCTTGACACTGTATACCG
                                                                                                                                                         292
                                                                                                                                                                                      181
                                                                                                                                                                                                                  232
                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                     113 CAGGACTTTGTCCTGCTGGAGAATTTCACCAGTGAGGCTGCCTTCATTGAGAACCTCCGG 172
                                                                                                                                                                                                                                                                          173
                                                                                                                                                                                                                                                                                                                                               Local Similarity
GGCAAGGCAAGACAGAGA 387
                            GGGCAGGCAAGACAGAGGCCACCAAGA 422
                                                                                                                                                                                                                              GGCACTTCGTACTGAGCAGTCGAGNACCCGGCAGTGATTNTCTGGGNNGAGAGCCGG
                                                                                                                                                                                          TCCCTACCGAGACCTACAGATCTACAGCCGGCAGCATATGGAACGCTACCGTGGTGTCAG
                                                                                                                                TTTCTATGAAGTACCACCTC-----ATTTGTTTGCAGTGGG-TGACACTGTATACCG
                                                                                                                                                                      TCCCTACCGAGACCTACAGATCTACNGCCCGGCATCTTATTTNAACGGGNNNCGTGNTAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAGTCGGAGCAGGAGGAATACGAGGCTGAGGGCATCGCGTGG 1372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CAGTTCTGCATCAACTACTGCAATGAGAAGCTGCAGCAGCTCTTCATCGAGCTGACTCTC 1330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACGGTTCTTGGGCTCCTGGACATTTACGGCTTTGAAGTGTTTTCAGCATAACAGCTTCGAG 1270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAATTGGAACAAGAAGAATATCTTAAAGAGAAAATCAATTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CAATTATGTATCAATTATACCAATGAAAAACTCCAACAATTCTTCAATCACCATATGTTC
                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                              4.98;
73.98;
                                                                                                                                                                                                                                                                                                                                                                                                             Score 178; DB 10;
Pred. No. 2.4e-41;
0; Mismatches 83;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ດ
                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 457;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1515
                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                           18;
                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                     360
                                                                                 395
                                                                                                                                          342
                                                                                                                                                                                                                                180
                                                                                                             300
                                                                                                                                                                                                    291
                                                                                                                                                                                                                                                            231
                                                                                                                                                                       240
                                                                                                                                                                                                                                                                                                                                                 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1473
                                                                                                                                                                                                                                                                                                                                                                                                         6,
```

```
APPLICANT: Harper, Jeff
APPLICANT: Kreps, Joel
APPLICANT: Wang, Xun
APPLICANTON: STRESS-REGULATED GENES OF PLANTS, TRANSGENIC PLANTS CONTAINING
CURRENT APPLICATION: SAME, AND METHODS OF USE
CURRENT APPLICATION NUMBER: US/09/938,842A
PRIOR APPLICATION NUMBER: US/09/938,842A
PRIOR FILING DATE: 2001-08-24
PRIOR FILING DATE: 2001-08-24
PRIOR APPLICATION NUMBER: US/09/27,866
PRIOR APPLICATION NUMBER: US/09/264,647
PRIOR APPLICATION NUMBER: US/09/264,647
PRIOR APPLICATION NUMBER: US/09/264,647
PRIOR FILING DATE: 2001-06-22
NUMBER OF SEQ ID NO 977
LENGTH: 3501
TYPE: DNA
ORGANISM: Arabidopsis thaliana
US-09-938-842A-977
                                                           Ъ
                                                                                             ρy
                                                                                                                                    B
                                                                                                                                                                     δÃ
                                                                                                                                                                                                                Ъ
                                                                                                                                                                                                                                                  Q
                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                           Ъ
                                                                                                                                                                                                                                                                                                                                                                       B
                                                                                                                                                                                                                                                                                                                                                                                                     Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                    • Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ρy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               γ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ДЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 7
US-09-938-842A-977
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match 4.8%;
Best Local Similarity 48.6%;
Matches 656; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 977, Application US/09938842A Patent No. US20020160378A1
                                      1023 ATGTGCTGAAGGGGAAAGGTCATATCATATTTTTATCAACTTTGTGCTGGGGCTTCACC
                    715
                                                                                                                                    963
                                                                                                                                                                         595
                                                                                                                                                                                                                903
                                                                                                                                                                                                                                                                                           843
                                                                                                                                                                                                                                                                                                                                                      795 TGCTAAAATAGCTATGCAATACTTGGCT------
                                                                                                                                                                                                                                                                                                                                                                                     415 CACCAAGAGACTGCTCCAGTTCTATGCAGAGACCTGCCCAGCCCCTGAACGGGGTGGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         675
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 621
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             175 GCGGTTCCGGGAGAACCTCATTTATACCTACATCGGTCCTGTCCTAGTCTCTGTCAATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   501 GGACGATCTTATGCAGCTTAGTTACTTAAATGAGCCATCAGTGTTGTACAACCTCAACTA 560
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          115 GGACTTTGTCCTGCTGGAGAATTTCACCAGTGAGGCTGCCTTCATTGAGAACCTCCGGCG 174
GGAGACTCTCCGTCGGCTGGGCTTGGAACGGAACCCCCAGAGCTACTTGTACCTGGTGAA 774
                                                                                                                  TGGAAAGATATCGGGTGCTCAAATTCAAACCTTTTTACTAGAAAAGTCTAGAGTGGTCCA
                                                                                                                                                    GGGTGCCCCCGTGGGAGGCCACATTCTCAGTTACCTCCTGGAAAAGTCCCGGGTGGTGCA 654
                                                                                                                                                                                             ATTGAGAAATGATAATTCTAGTCGTTTTGGGAAGCTAATAGAGATTCATTTTAGTGAAAG
                                                                                                                                                                                                                      TCTCCGCAACGATAACTCCAGCCGGTTTGGGAAAGTACATGGATGTGCAGTTTGACTTCAA
                                                                                                                                                                                                                                                                         GATCGAATATGAGATACTTAAGACTAATCCCATTTTGGAAGCATTTGGAAATGCAAAAAC
                                                                 AGTGCGAGACCGCCTGTTGCAGAGCAACCCCGTGTTAGAGGCCTTTTGGGAATGCCAAGAC
                                                                                                                                                                                                                                                                                                                                                                                                                              CGATGAAGTTAACCAATCTATCATTATCAGCGGCGAGAGTGGAGCAGGGAAAACTGAGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                    TGAGCGTCGGGACCAGGCAGTGATGATTTCTGGAGAGACTGGGGCAAGGCAAGACACAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TAGGTACAACCAAGACATGATATATACAAAAGCAGGGCCAGTTTTGGTGGCTGTGAATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATCAAATGAGAGTCCTCATGTGTATGCAATTGCAGATACAGCAATTCGCGAAATGATACG 734
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CTATGAAGTACCACCTCATTTGCTTTGCAGTGGCTGACACTGTATACCGGGCACTTCGTAC 354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TTTTAAGGAGGTTCCTTTATACGGAAATCGATACATTGAAGCATACAGG-----AAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTACCGAGACCTACAGATCTACAGCCGGCAGCATATGGAACGCTACCGTGGTGTCAGTTT 294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 174.6; DB 9; Length Pred. No. 8.9e-40; 0; Mismatches 654; Indels
                                                                                                                                                                                                                                                                                                                                                    -GCTCTTGGAGGCGGAAGCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 3501;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   39;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                    1022
                                                                                                                                                                                             962
                                                                                                                                                                                                                                    594
                                                                                                                                                                                                                                                                           902
                                                                                                                                                                                                                                                                                                             534
                                                                                                                                                                                                                                                                                                                                                                                       474
                                                                                                                                                                                                                                                                                                                                                    842
                                                                                                                                                                                                                                                                                                                                                                                                                                                                414
                                                                                                                                                                                                                                                                                                                                                                                                                          794
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 674
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          620
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5
```

```
APPLICANT: Rosen et al.
TITLE OF INVENTION: Nucleic Acids, Proteins and FILE REFERENCE: PA104
CURRENT APPLICATION NUMBER: US/09/925,302
CURRENT FILING DATE: 2001-08-10
PRIOR APPLICATION NUMBER: PCT/US00/05918
PRIOR TILING DATE: 2000-03-08
PRIOR APPLICATION NUMBER: 60/124,270
PRIOR FILING DATE: 1999-03-12
NUMBER OF SEQ ID NOS: 896
SOFTWARE: PATENTIN VET. 2.0
SEQ ID NO 243
LENGTH: 736
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Q
                                                                                                                                                                                                                                                                                                                              RESULT 8
US-09-925-302-243
                                                                                                                                                                                                                                                                                                                                                                                                                                         20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                 Sequence 243, Application US/09925302 Patent No. US20020044941A1
ORGANISM: Homo sapiens FEATURE:
                                   TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1665
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1605
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1545
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1072
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1012
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1083
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    775
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     952
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           895
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                835
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CCCCAGCTGGCGAACACCACGGTTCTTGGGCTCCTGGACATTTACGGCTTTTGAAGTGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GACATTCACCTGGCTGGTCAGAAAGATCAATAGGTCACTGGCCTCTAAGGACGCTGAGAG 1191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CAGCGTCCTACATCTGGGCAACATCCACTT---TGCTGCTGACGACGACAGCAATGCCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGGCATCATCTCCATCTTGGATGAAGAGT 1460
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GACAAGGGTTGATTTTGAGGACAACCAAAATTGTCTGAGTCTTTTTGAAAAAGAAACCATT 1784
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTTCATCGAGCTGACTCTCAAGTCGGAGCAGGAGGAATACGAGGCTGAGGGCATCGCGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGGAAAGAGGCGAACTGGCAGATCTATCAGTATTCTTGATATCTACGGCTTTGAATCATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACTGAACCTTGAACAGGCGGCATATGCAAGGGATGCGCTTGCCAAGGCTGTGTACAGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GCTTACGCTAACTTTATCGAAACGTAACATGAGAGTTAGGAATGATACCATTGTACAGAA 1439
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACTTAGGGAAGCCCTGACCCACAGGAAGATCATCGCCAAGGGGGAAGAGCTCCTGAGCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGTTACTACTGAGAACCAGCTCAAATATCTGACCAGGCTCCTTGGTGTGGGAAGGTACAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TGCAGTTTTATGGCTGGGAAACGTTTCCTTCACCGTTATTGACAATGAAAACCATGTTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AGCTCTGGACATTGTGCATGTTAGTAAAGAAGATCAAGAAAGTGTATTTGCAATGCTTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GAGTAATTGTTATTCAATTAACGGAGTTGACGATGCTGAACGTTTTCACACTGTTAAGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GGAACCTGTCCAGTACTTCAACAACAAGATCATCTGTGACCTGGTAGAGGAGAAGTTCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTTTAACCGTCATCTATTCAAGCTGGAGCAAGAGGAATATATCCAGGATGGCATTGACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CCTGTTTGACTGGCTGGTTGAACAGATCAACAAATCTCT------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGCGCTGTCCGTCATTGACTTCACTGAGGATGAAGTGGAGGACTTGCTCAGCATCGTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGGCCAGTGTGCCAAGGTCTCCTCCATCAACGACAAGAGTGACTGGAAGGTTATGAGGAA
                                                                                                                                                                                                                                             and
                                                                                                                                                                                                                                             Antibodies
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -TGCTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1544
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1371
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1011
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              894
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1139
```

```
US-09-764-853-131

; Sequence 131, Application US/09764853

; Patent No. US20020090672A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Вb
                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-09-925-302-243
US-09-764-853-131
                                            Prior application data removed -
NUMBER OF SEQ ID NOS: 939
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 131
LENGTH: 2339
                                                                                                                                                                   APPLICANT: Rosen et al.
TITLE OF INVENTION: Nucleic Acids, Proteins,
FILE REFERENCE: PJZ06
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity
                                                                                                                                                                                                                       GENERAL INFORMATION:
                                                                                                                                  CURRENT APPLICATION NUMBER: US/09/764,853
CURRENT FILING DATE: 2001-01-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME/KEY: misc feature LOCATION: (435)
OTHER INFORMATION: n e
              ORGANISM: Homo sapiens
                                TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1367 GCGTGGGAACCTGTCCAGTACTTCAACAACAAGATCATCTGTGACCTGGTAGAGGAGAAG 1426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1777
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1427
                                                                                                                                                                                                                                                                                                                                                                                                                                                   1897
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1837
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      485
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          425
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TTCAAGGGCATCATCTCCATCTTGGATGAAGAGTGCCTGCGTCCTGGGGAGGCCACGGAC 1486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CGGTGCATCAAGCCAAACGACGCCAAGCAGCCGGGTCGCTTTGATGAGGTGCTCATCCGA 1896
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GACAAGAGTGAGCTCAGTGACAAGAAGCGG------CCAGGACGGTGGCCACCCAG 1776
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAGCTCGCTGACCAGAAGACCAGGAAATCCCTAGACCGAGGGGGAGTTCCGCCTTCTGCAT 1606
                                                                                                                                                                                                                                                                                                                                             TTCCGCCAGACATACGAGAAGTTTCTTCACAGGTATAAG
                                                                                                                                                                                                                                                                                                                                                                              TATCGTCGCAAATATGAGGCTTTCCTGCAGAGGTACAAG 1995
                                                                                                                                                                                                                                                                                                                                                                                                              CACCAAGTAGAATATCTTGGACTACTGGAAAATGTGAGAGTGCGTCGGGCAGGATTTGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                CATCAGGTGAAGTACCTGGGACTGATGGAGAATCTGCGCGTGCGCAGAGCTGGCTTTGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCTGAAGGCAAACTGAGCATTACAGAGGTGACCAAGCGACCTCTGACTGCTACCTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TTTCAAGATTTCAAGCGCCTTATGTATAACAGTTCAAATCCTGTGCTCAAGAATATGTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAGCTCTGTGCCTCAGACAAAATTCTGGAGTTTGATCGA---AATTTTCGAATTCGACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GAAATGTTTCTTGAAGCACTTAACAGTAAATTGGGCAAACACGCCCATTTTTCCAGCCGA 187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CTGACCTTTCTGGAGAAGTTGGAGGACACTGTCAAGCCCCACCCTCACTTCCTGACGCAC 1546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CACAAAGGGATCATTGCAATCCTTGATGATGCTTGCATGAATGTCGGCAAAGTCACCGAT 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GCGTGGAAACATATTGACTACTTCAACAATCAGATCATTGTTGACCTCGTGGAGCAACAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CGTTGCATCAAACCCAATGACAAGAAATCTCCACAGATATTTGATGATGAACGCTGCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TTTAAGAATTNTATGATTGCTCTAGTAGACAACCTTGCATCAAAGGAACCATATTACGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TTCCGGAACCTGAAGGAGACCATGTGCAGCTCAATGAACCCCATCATGGCCCAGTGCTTT 1726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  344;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3.9%;
53.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   equals a,t,g,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 142.4; DB 10; Pred. No. 6.2e-31;
                                                                                                                    consult PALM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       or
                                                                                                                                                                                     and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  282;
                                                                                                                    or
                                                                                                                  file wrapper
                                                                                                                                                                                     Antibodies
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1836
                                                                                                                                                                                                                                                                                                                                                                                                                 604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2;
```

```
. . . . . . . . . . . . .
                                                                                                                                                    US-09-834-975-1025
                                                                                                                                                                                                                а
                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                           Š
Sequence 1025, Application US/09834975
Patent No. US20020110815A1
GENERAL INFORMATION:
APPLICANT: Lillie, James
APPLICANT: Brown, Jeffrey
APPLICANT: Bolt, Andrew
APPLICANT: Walt, Christophe
TITLE OF INVENTION: MOVEL GENES, COMPOSITIONS AND METHODS
TITLE OF INVENTION: FOR THE IDENTIFICATION, ASSESSMENT, P
TITLE OF INVENTION: OF HUMAN CANCERS
                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  рь
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                         1979
                                                                                                                                                                                                                                                                                                 1919
                                                                                                                                                                                                                                                                                                                                                        1859
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1746
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1686
                                                                                                                                                                                                              908
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1626
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1506 TGGAGGACACTGTCAAGCCCCACCTCACTTCCTGACGACAAGCTCGCTGACCAGAAGA 1565
                                                                                                                                                                                                                                                                                                                            788
                                                                                                                                                                                                                                                                                                                                                                                    728
                                                                                                                                                                                                                                                                                                                                                                                                                                          899
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  809
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1206 GCACCACGGTTCTTGGGCTCCTGGACATTTACGGCTTTGAAGTGTTTCAGCATAACAGCT 1265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        548
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local Similarity
                                                                                                                                                                                                                             TCCTGCAGAGGTACAAGTCACT
                                                                                                                                                                                                          TTGTAGAACGATACAAGTTACT
                                                                                                                                                                                                                                                                                   TGATGGAGAATCTGCGCGTGCGCAGAGCTGGCTTTGCCTATCGTCGCAAATATGAGGCTT
                                                                                                                                                                                                                                                                                                                                CCAAGCAGCCGGGTCGCTTTGATGAGGTGCTCATCCGACATCAGGTGAAGTACCTGGGAC
                                                                                                                                                                                                                                                        TCGTGGAGACCATCCATATCAGTGCTGCTGGCTTCCCCCATCCGGGTCTCTCACCGAAACT
                                                                                                                                                                                                                                                                                                                AGGGCCAGGCGCAGACCTTTCTCCAAGAGGGGTCCTGAGCCAGCTGGAGGCCTGTGGCC
                                                                                                                                                                                                                                                                                                                                                                       TTCTGCAGGTCCTACACAGCACCACGCCCCACTACATTCGCTGCATCAAGCCCAACAGCC
                                                                                                                                                                                                                                                                                                                                                                                         TCGTGGAGATCCTGAGGTCTAAGGAGCCTGCCTATATCCGGTGCATCAAGCCAAACGACG
                                                                                                                                                                                                                                                                                                                                                                                                                              GCCAGAGGAGGGCCCCTGTGTTGACCGTGGTGCTCCAAGTTCAAGGCCCTCACTGGAGCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACAAGAAGCGGCC-----AGGACGGTGGCCACCCAGTTCAAGATGAGCCTCCTGCAGC 1798
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CCATGTGCAGCTCAATGAACCCCATCATGGCCCAGTGCTTTGACAAGAGTGAGCTCAGTG 1745
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CCCTGCTCATGGGGCTGTTTCCTACTAACCCCAAAGAGAAGACCCCAAGGAGGAACCCCCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AGAAGAACAAGGACCCTATCCCACCTGAGCTGACCAGGCTCCTGCAGCAATCCCAGGACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACAGTGTGACTGGGTTTCTGGATAAAAACAATGACCTCCTCTTCCGGAACCTGAAGGAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CCAGCTTCATTGTGGTGCATTATGCGGGGCCTGTGCGGTACCACACAGCAGGCCTGGTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CCAGGAAATCCCTAGACCGAGGGGAGTTCCGCCTTCTGCATTATGCTGGAGAGGTGACCT 1629
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GCATTGAGACTGCCCTGGCAGGCAGCCCCTGCCTGGGCCACAATAAGCTCAGCCGGGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TCTTGGATGAAGAGTGCCTGCGTCCTGGGGGAGGCCACGGACCTGACCTTTCTGGAGAAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACTTCAACAACAAGATCATCTGTGACCTGGTAGAGGAGAAGTTCAAGGGCCATCATCTCCA 1445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTCTCAAGTCGGAGCAGGAGGAATACGAGGCTGAGGGCATCGCGTGGGAACCTGTCCAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGACCACTTTCATAGGCCTGCTGGATGTGTATGGATTTGAATCATTTCCTGACAACAGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACCAGGACAACCAGCCCTGTTTGGATCTCATTGAGGGAAGCCCCATCAGCATCTGCTCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TGGAACAGTTGTGCATCAACTACGCCAATGAGAAGCTGCAGCAGCATTTTGTGGCTCACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TCGAGCAGTTCTGCATCAACTACTGCAATGAGAAGCTGCAGCAGCTCTTCATCGAGCTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          404;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3.98;
                                                                                                                                                                                                                                   2000
                                                                                                                                                                                                          929
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 141.2; DB 10;
Pred. No. 3e-30;
0; Mismatches 388;
             ASSESSMENT, PREVENTION,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2339;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                     1978
                                                                                                                                                                                                                                                                                                                                             1918
                                                                                                                                                                                                                                                                                                                                                                                                     1858
              AND THERAPY
                                                                                                                                                                                                                                                                                                                 847
                                                                                                                                                                                                                                                                                                                                                                        787
                                                                                                                                                                                                                                                                                                                                                                                                                                727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1685
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1505
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      370
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                'n
```

```
В
                                  Qy
                                                               DЬ
                                                                                      γ
                                                                                                                    Вb
                                                                                                                                            Qγ
                                                                                                                                                                        В
                                                                                                                                                                                                Qy
                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                  QΥ
                                                                                                                                                                                                                                                                                Ъ
                                                                                                                                                                                                                                                                                                      Qy
                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                           Qy
                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                           B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILE REFERENCE: MRI-016B
CURRENT APPLICATION NUMBER: US/09/834,975
CURRENT FILING DATE: 2001-04-13
PRIOR APPLICATION NUMBER: 60/197,538
PRIOR FILING DATE: 2000-04-14
NUMBER OF SEQ ID NOS: 1046
SOFTWARE: FASESEQ for Windows Version 4.0
SEQ ID NO 1025
LENGTH: 2345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   γQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   д
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; NAME/KEY: misc_feature
; LOCATION: (1)...(2345)
; OTHER INFORMATION: n = A,T,C
US-09-834-975-1025
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches 422;
                                                                                       1220
                                                                                                                                             1160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LENGTH: 23
TYPE: DNA
                                                                                                                                                                                                  1100
           967
                                                                                                                                                                                                                                                     1040
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM: Homo sapiens FEATURE:
                                                               907
                                                                                                                    862
                                                                                                                                                                       802
                                                                                                                                                                                                                          742
                                                                                                                                                                                                                                                                                682
                                                                                                                                                                                                                                                                                                         980
                                                                                                                                                                                                                                                                                                                                    622
                                                                                                                                                                                                                                                                                                                                                             923
                                                                                                                                                                                                                                                                                                                                                                                        562
                                                                                                                                                                                                                                                                                                                                                                                               863 GATGAAGTGGAGGACTTGCTCAGCATCGTGGCCAGCGTCCTACATCTGGGCAACATCCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                             502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   388
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             563 GGAAAGTACATGGATGTGCAGTTTGACTTCAAGGGTGCCCCCGTGGGAGGCCACATTCTC 622
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local Similarity
ATCAACTACTGCAATGAGAAGCTGCAGCAGCTCTTCATCGAGCTGACTTCTCAAGTCGGAG
                                                    AATAAAGCTCTG-------GATAGGACCAAACGTCAGGGAGCATCTTTCATT
                                                                                                                           AATAGGTCACTGGCCTCTAAGGACGCTGAGAGCCCCAGCTGGCGAAGCACCACGGTTCTT
                                                                                                                                                             GTAGAAGCATTGGCAAAAGCTACCTATGAGCGGCTCTTTCGCTGGCTCGTTCATCGCATC
                                                                                                                                                                                                                              ATCATCGCCAAGGGGGAAGAGCTCCTGAGCCCACTGAACCTTGAACAGGCGGGCATATGCA 1099
                                                                                                                                                                                 GAAGAGATTCTGTCAATGCTTAAAGTAGTATCTTCAGTGCTACAGTTTGGAAATATTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                 CAAGACAAAGATAATTTCCAGGAGACCATGGAAGCAATGCACATAATGGGCTTCTCCCAT
                                                                                                                                                                                                                ATCAAGGTCGGCCGAGACTATGTGCAAAAAGCCCCAGACCAAAGAACAGGCAGATTTTGCA
                                                                                                                                                                                                                                                                    CTCTGCCATCTTCTTGGGATGAATGTGATGGAGTTTACTCGGGCCATCCTGACTCCCCGG
                                                                                                                                                                                                                                                                                              CTGACCAGGCTCCTTGGTGTGGAAGGTACAACACTTAGGGAAGCCCTGACCCACAGGAAG
                                                                                                                                                                                                                                                                                                                         TTCAAAAAGGAGAAATACTGATCAAGCTTCCATGCCAGAAAATACAGTTGCGCAGAAG
                                                                                                                                                                                                                                                                                                                                                  TTTGCTGCTGACGAGGACAGCAATGCCCAGGTTACTACTGAGAACCAGCTCA---AATAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                 AACGACAAGAGTGACTGGAAGGTTATGAGGAAGGCGCTGTCCGTCATTGACTTCACTGAG 862
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGCAAATTTATTCGGATCAACTTTGATGTAACTGGCTATATCGTTGGGGCCAACATTGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAGGATTTA-ATAACTACAGGTTTCTCTCCAATGGCTATATTCCTA---TTCCGGGACAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CGGAACCCCCAGAGCTACTTGTACCTGGTGAAGGGCCAGTGTGCCAAGGTCTCCTCCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATCTTTTACCAGTTGTT--ATCTGGAGCAGGAGAACACCTAAAGTCTGATTTGCTTCTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACATACCTTCTGGAAAAGTCTCGTGCTGTTCGTCAAGCCAAAGATGAACGTACTTTTCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGTTACCTCCTGGAAAAGTCCCGGGTGGTGCCACCAAAATCACGGAGAGCGGAACTTCCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3.2%;
51.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0ř
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 118.8; DB 10;
Pred. No. 8.8e-24;
0; Mismatches 382;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   24;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                          1339
                                                                               1279
                                                                                                                                   1219
                                                     966
                                                                                                          906
                                                                                                                                                              861
                                                                                                                                                                                        1159
                                                                                                                                                                                                                                                                                               1039
                                                                                                                                                                                                                 801
                                                                                                                                                                                                                                                                                                                          681
                                                                                                                                                                                                                                                                                                                                                     979
                                                                                                                                                                                                                                                                                                                                                                             621
                                                                                                                                                                                                                                                                                                                                                                                                                                   561
                                                                                                                                                                                                                                                                                                                                                                                                        922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            387
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     682
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5
```

Š

1387

```
В
                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
DЬ
                                     Š
                                                                            Вþ
                                                                                                             Qy
                                                                                                                                                           В
                                                                                                                                                                                            Qγ
                                                                                                                                                                                                                                                                                                                     Ъ
                                                                                                                                                                                                                                                                                                                                                    Qy
                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DЪ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-09-851-682A-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-09-851-682A-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUMBER OF SEQ ID NOS: 3
SOFTWARE: FRASTSEQ for Windows Version
SEQ ID NO 2
LENGTH: 8473
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 2, Application US/09851682A Patent No. US20020091248A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches 288;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE OF INVENTION: MYOSIN IXA AND CYCLIC NUCLEOTIDE GATED FITTLE OF INVENTION: CHANNEL-15 (CMGC-15) POLYNUCLEOTIDES, POLYNUCLEOTIDES, POLYNUCLEOTIDES, POLYNUCLEOTIDES, POLYNUCLEOTIDES, POLYNUCLEOTIDES, POLYNUCLEOTIDES, POLYNUCLEOTION, METHODS, AND USES THEREOF FILE REFERENCE: 200130.442

CURRENT FILING DATE: 2001-05-08

PRIOR APPLICATION NUMBER: US/09/172,422

PRIOR APPLICATION NUMBER: US/09/172,422

PRIOR FILING DATE: 1998-10-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Adams, Arwen E. APPLICANT: Chiu, Choi Yin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: DNA ORGANISM: Homo sapien
1191
                                                                                                                                                             1071
                                                                                                                                                                                                                                          1014
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      563
                                                                                                                                                                                                   503
                                                                                                                                                                                                                                                                                 443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           143 AGTGAGGCTGCCTTCATTGAGAACCTCCGGCGGCGGCGGTTCCGGGAGAACCTCATTTATACC 202
                                                                                                                                                                                                                                                                                                                                                                                                    894
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          203 TACATCGGTCCTGTCCTAGTCTGTCAATCCCTACCGAGACCTACAGATCTACAGCCGG 262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          714 AATGAGAAAACTCTCTTAGAAAACCTACGAGATCGCTTTAAGCATGAAAAAATTTATACC 773
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local
                                                                                                                                                                                          CCCGTGTTAGAGGCCTTTGGGAATGCCAAGACTCTCCGCAACGATAACTCCAGCCGGTTT 562
                                                                                                                                                                                                                                      GCTCTCAGTCAGAA----AGGATTTGCCAGTGGAGTAGAACAGATTATTCTTGGAGCTGGA 1070
                                                                                                       GGAAAGTACATGGATGTGCAGTTTGACTTCAAGGGTGCCCCCGTGGGAGGCCACATTCTC
                                                                                                                                                                                                                                                                                                                 TCAGGAGAGTGGTTCTGGGAAGACTCAAAGCACAAACTTTCTTATTCACCACCTTACT 1013
                                                                                                                                                                                                                                                                                                                                                                                                                        GTGGCTGACACTGTATACCGGGCACTTCGTACTGAGCGTCGGGACCAGGCAGTGATGATT 382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GTGGCTGATGTAGCTTATCATGCCATGCTTCAGCGCAAAAAAGAATCAGTGCATCGTGATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TATGTTGGCAGTATTCTAATAGTTATTAACCCATTCAAGTTTCTTCCTATTTATAACCCC
AAATATCTACTGGAGAAGTCCAGACTCGTTTATCAGGAGCATAATGAACGGAACTATCAT 1250
                                   AGTTACCTCCTGGAAAAGTCCCGGGTGGTGCACCAAAATCACGGAGAGCGGAACTTCCAC
                                                                                                                                                         CCAGTACTTGAGGCCTTTGGAAATGCAAAGACAGCTCATAATAACAATTCAAGTCGTTTT
                                                                                                                                                                                                                                                                           GAGACCTGCCCAGCCCCTGAACGGGGTGGCGCAGTGCGAGACCGCCTGTTGCAGAGCAAC
                                                                                                                                                                                                                                                                                                                                                        TCTGGAGAGAGTGGGGCAGGCAAGACAGAGGCCACCAAGAGACTGCTCCAGTTCTATGCA 442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAATATGTCAAAATGTATGATAACCACCAACTGGGAAAACCTGAGCCCCACATTTATGCT 893
                                                                          GGGAAGTTTATTCAAGTAAATTACCAGGAAACAGGCACTGTACTTGGTGCCTATGTTGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Leng, Song
Sheffield, Val
Welch, Juliet
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Chiu, Choi Ying
Duhl, David
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gorman, Susan W
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 104.6; DB 10; Length 8473; Pred. No. 2.6e-19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches 284; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 POLYPEPTIDES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                         1130
                                                                                                                                                                                                                                                                             502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           833
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1.
```

```
Sequence 945, Application US/10046935

Patent No. US20020156011A1

GENERAL INFORMATION:
APPLICANT: Jiang, Yuqiu
APPLICANT: Harlocker, Susan L.
APPLICANT: Secrist, Heather
APPLICANT: Wang, Aijun
APPLICANT: Wang, Aijun
APPLICANT: Stolk, John A.
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE
TITLE OF INVENTION: AND DIAGNOSIS OF COLON CANCER
FILE REFERENCE: 210121.527C1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; OTHER INFORMATION: n e
; NAME/KEY: SITE
; LOCATION: (659)
; OTHER INFORMATION: n e
US-09-764-853-340
                                                                                                                                                                                                                                                                                                                                                                                          Дb
                                                                                                                                                                                                                                                                                                                                                                                                                            Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Q
                                                                                                                                                                                                                                  US-10-046-935-945
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 12
US-09-764-853-340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Prior application data removed - consult PALM NUMBER OF SEQ ID NOS: 939
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 340
LENGTH: 666
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
APPLICANT: Rosen et al.
TITLE OF INVENTION: Nucleic Acids, Proteins, and
FILE REFERENCE: PJZ06
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Patent No. US20020090672A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 340,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches 165;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CURRENT APPLICATION NUMBER: US/09/764,853
CURRENT FILING DATE: 2001-01-17
CURRENT APPLICATION NUMBER: US/10/046,935
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURE:
NAME/KEY: SITE
LOCATION: (181)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME/KEY: SITE LOCATION: (407
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      OTHER INFORMATION: n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1202 CGAAGCACCACGGTTCTTGGGCTCCTGGACATTTACGGCTTTTGAAGTGTTTTCAGCATAAC 1261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            118
                                                                                                                                                                                                                                                                                                                                                                                          297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CTGACTCTCAAGTCGGAGCAGGAGGAATACGAGGCCTGAGGGCATCGCGTGGGGAACCTGTC 1381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AGCTTCGAGCAGTTCTGCATCAACTACTGCAATGAGAAGCTGCAGCAGCTGCTTCATCGAG 1321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TCCCTCATAAATGAGGTGGG
                                                                                                                                                                                                                                                                                                                                                   TCCATCTTGGATGAAGAGTG 1461
                                                                                                                                                                                                                                                                                                                                                                                                                            CAGTACTTCAACAACAAGATCATCTGTGACCTGGTAGAGGAGAAGTTCAAGGGCATCATC 1441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CGTGGGACCACTTTCATAGGCCTGCTGGATGTGTATGGATTTGAATCATTTCCTGACAAC 177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GTCTTTTACCAGCTACTGGAGGGGGGGGGGAGGA 717
                                                                                                                                                                                                                                                                                                                                                                                          AACTACCAGGACAACCAGCCCTGTTTGGATCTCATTGAGGGAAGCCCCCATCAGCATCTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AGTNTGGAACA-TTGTGCATCAACTACGCCAATGAGAAGCTGCAGCAGCATTTTGTGGCT 236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (407)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (181)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Application US/0976485
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2.7%; Score 98.2; I
63.5%; Pred. No. 3.46
ative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      equals a,t,g,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      equals
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               equals
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      a,t,g,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ġ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        .4e-18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  file wrapper
                                                        THE THERAPY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Antibodies
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps .
```

۳.

CURRENT FILING DATE: 2002-01-15
NUMBER OF SEQ ID NOS: 2239
SOFTWARE: FASTSEQ for Windows Version 4.0
SEQ ID NO 945
LENGTH: 360

```
Sequence 945. Application US/09878178
Patent No. US20020177552A1
GENERAL INFORMATION:
APPLICANT: Jiang, Yuqiu
APPLICANT: Harlocker, Susan L.
APPLICANT: Heather
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE THERAPY
FILE REFERENCE: 210121.527
CURRENT APPLICATION NUMBER: US/09/878,178
CURRENT FILING DATE: 2001-06-08
SOFTWARE: FastSEQ for Windows Version 4.0
                                 Ş
                                                         В
                                                                                Ş
                                                                                                        В
                                                                                                                               Ş
                                                                                                                                                                                                    ; LENGTH: 360
; TYPE: DNA
; ORGANISM: Homo sapien
US-09-878-178-945
                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 14
US-09-878-178-945
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                  Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; TYPE: DNA
; ORGANISM: Homo saplens
US-10-046-935-945
2030 GACGGCCCCAGGATGGTGTGGCCGTGTTGGTCAGACACCTTCGGCTACAAGCCAGAAGAGT
                                                                                 1970
                                                                                                   1910 ACCTGGGACTGATGGAGAATCTGCGCGTGCGCTAGAGCTGGCTTTGCCTATCGTCGCAAAT 1969
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ouery Match 2.6%;
Best Local Similarity 55.6%;
Matches 184; Conservative
                                                        61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2210 TTCATTGGCGACAGAAATTTCTCCGGGTGAA 2240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2090
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    301 GGAAATGCCGCACACACTTCCTGCTAATGAA 331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2030 GACGGCCCCAGGATGGTGGGCCGTGTTGGTCAGACACCTCGGCTACAAGCCAGAAGAGT 2089
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1970 ATGAGGCTTTCCTGCAGAGGTACAAGTCACTGTGCCCAGAGACATGGCCCATGTGGGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1910 ACCTGGGACTGATGGAGAATCTGCGCGTGCGCTGGCGTGGCCTTTGCCTATCGTCGCAAAT 1969
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                121
                                                    ATGAGGCTTTCCTGCAGAGGTACAAGTCACTGTGCCCAGAGAGACATGGGCCCATGTGGGCAG
                                     184;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCTGAGGAAGCAACGCCTGGAGGACTTGGCCACTCTCATTCAGAAGATATATCGGGGGT 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACTCCCTGGAAGTCCGGCGGCAGAGTCTAGCCAACATCCAAGGCGGCCTGGAAGGGGCT 2209
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GACCAGCCAGGTCTGGTGTGGAGGTCCTATTTAATGAATTAGAAATTCCCGTGGAAGAAT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACTCCTTTGGTAGATCAAAGATATTCATCCGAAAACCCCAAGAACATTATTCAAATTAGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACAAAATGGGCAGGACTAAGATCTTCATCCGATTCCCCAAGACCTTATTTGCCACAGAGG 2149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                  Conservative
                                                                                                                                                            2.6%;
                                                                                                                                           Score 95.8; DB 9;
Pred. No. 1.1e-17;
0; Mismatches 147;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 95.8; DB 9;
Pred. No. 1.1e-17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches 147;
                                                                                                                                                               Length 360;
                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 360;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                     Gaps
              2089
                                                              2029
                                      120
                                                                                       60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2029
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60
                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0,
```

```
В
                                                Qy
                                                                                Ъ
                                                                                                          Qy
                                                                                                                                           DЬ
                                                                                                                                                                        Qy
                                                                                                                                                                                                        Вb
                                                                                                                                                                                                                                    Qy
                                                                                                                                                                                                                                                                      DЬ
                                                                                                                                                                                                                                                                                                 γ
                                                                                                                                                                                                                                                                                                                                   DЬ
                                                                                                                                                                                                                                                                                                                                                                 Qγ
                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURE:

NAME/KEY: misc_feature
LOCARTION: (1)...(476)
OTHER INFORMATION: n = A,T,C
US-09-815-343-787
                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match 2.5
Best Local Similarity 54.8
Matches 224; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUMBER OF SEQ ID NOS. 1556
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 787
LENGTH: 476
TYPE: DNA
ORGANISM: Homo sapien
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 15
US-09-815-343-787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ρy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CURRENT APPLICATION NUMBER: US/09/815,343
CURRENT FILING DATE: 2001-03-22
NUMBER OF SEQ ID NOS: 1556
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Meagher, Madeleine APPLICANT: Xu, Jiangchun APPLICANT: Xu, Jiangchun E. APPLICANT: King, Gordon E. TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR TITLE OF INVENTION: DIAGNOSIS OF COLON CANCER FILE REFERENCE: 210121.504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 787, Application US/09815343
Pattent No. US20010055596A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 787,
                    876 ACTTGCTCAGCATCGTGGCCAGCGTCCTACATCTGGGCAACATCCACTT
355 GCCTGCTGNGGGTCATCTCAGGGGTTCTTCANCTCGGCNACATCGTCTT 403
                                                                                                                                                                         756
                                                                                                                                                                                181 TCCTGTCTGGGGCTGGAGAGCACCTGAAGACCGATCTCCTGTTGGAGCCGTA---CAACA
                                                                                                                                                                                                                                      696
                                                                                                                                                                                                                                                               636 AAAAGTCCCGGGTGGTGCACCAAAATCACGGAGAGCGGAACTTCCACGTCTTTTACCAGC 695
                                                                                                                                                                                                                                                                                                                              576 ATGTGCAGTTTGACTTCAAGGGTGCCCCCCGTGGGAGGCCACATTCTCAGTTACCTCCTGG
                                                                                                                                                                                                                                                                                                                                                                                          516 CCTTTGGGAATGCCAAGACTCTCCGCAACGATAACTCCAGCCGGTTTGGAAAGTACATGG 575
                                                                                                                                                                                                                                                                                                           61 GCATCAACTTTGATGTCAATGGCTACATTGTTGGAGCCAACATTGAGACTTATCTTTTGG
                                                                                                                                                                                                                                                                                                                                                                        2210 TTCATTGGCGACAGAAATTTCTCCGGGTGAA 2240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 301 GGAAATGCCGCACACACTTCCTGCTAATGAA 331
                                                                          ACTGGAAGGTTATGAGGAAGGCGCTGTCCGTCATTGACTTCACTGAGGATGAAGTGGAGG
                                                                                                                                                  GCTACTTGTACCTGGTGAAGGGCCAGTGTGCCAAGGTCTCCTCCATCAACGACAAGAGTG
                                                         TGTTCCACGAGACCATGGAGGCCATGAGGATTATGGGCATCCCAGAAGAGGAGCAAATGG
                                                                                                                     ARTACCGCTTCCTGTCCAATGGACA---CGTCACCATCCCCGGGCAGCAGGACAAGGACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121
                                                                                                                                                                                                              TACTGGAGGGGGGGGAGAGAGTCTCCGTCGGTCGGCTTGGGTTTGGAACGGAACCCCCAGA 755
                                                                                                                                                                                                                                              AGAAATCTCGTGCTATCCGGCNAGCCAAGGAAGGACGGACCTTCCACATCTTCTATTATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCTGAGGAAGCAACGCCTGGAGGACTTGGCCACTCTCATTCAGAAGATATATCGGGGGT 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACTCCCTGGAAGTČCGGCGGCAGAGCTCTAGCCAAGATCCAAGGCGGCCTGGAGGGGCT 2209
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACAAAATGGGGAGGACTAAGATCTTCATCCGATTCCCCAAGACCTTATTTGCCACAGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GACCAGCCAGGTCTGGTGTGGAGGTCCTATTTAATGAATTAGAAATTCCCCGTGGAAGAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACTCCTTTGGTAGATCAAAGATATTCATCCGAAACCCCAAGAACATTATTCAAATTAGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                               2.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            or
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 93; [
Pred. No. 8.
                                                                                                                                                                                                                                                                                                                                                                                                                                         red. No. 8.5e-17;
Mismatches 179;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 476;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       THERAPY
                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                        6;
                                                                                       875
                                                                                                                                                                                    237
                                                                                                                                                                                                                                                180
                                                                                                                                                                                                                                                                                                                                           635
                                                                                                                                                                                                                                                                                                                                                                         60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             180
                                                                                                                                                                                                                                                                                                                                                                                                                                    2
```

Search completed: December 9, 2002, 16:43:14 Job time : 145 secs

	* ,					
•						
					·	
				•		
			•			
		ıï				
		4	·			

4

٠,

(

```
Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Run
                                                                                                                                                                                                                                                                   Database
                                                                                                                                                                                                                                                                                                                                                                                                    Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                  Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OM nucleic -
                                                                                                                                                                                                                                                                                                                          Maximum
                                                                                                                                                                                                                                                                                                                                    Minimum
                                                                                                                                                                                                                                                                                                                                                    Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                          Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9
::
                                                                                                                                                                                                                                                                                                                         DB
DB
                                                                                                                                                                                                                                                                 ..
                                                                                                                                                                                                                                                                                                                        seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    nucleic search, using
                                                                                                                                                                                                                                                                                                                        length:
  16154066 seqs, 8097743376 residues
                                                                                                                                                                                                                                                                                                                                                                                           IDENTITY_NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                  US-09-893-371-3
3661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  December
                                                                                                                                                                                                                                                                                                                                                                                                                       ggagcggggccgggtccg.....ccacctgcaccttttagcca 3661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Copyright
em_gss_other:*
em_gss_pro:*
em_gss_rod:*
                                                                                                                                                                            gb_est1:*
                                                                                                                                                                                      em_estro:*
em_htc:*
                                                                                                                                                                                                                                               em_esthum:*
                                                                                                                                                                                                         em_estpl:*
                                                                                                                                                                                                                   em_estov:*
                                                                                                                                                                                                                            em_estmu:*
                                                                                                                                                                                                                                    em_estin:*
                                                                                                                                                                                                                                                        em_estba:*
                             em_gss_mus:*
                                       em_gss_mam:*
                                                em_gss_fun:*
                                                        em_gss_vrt:*
                                                                  em_gss_inv:*
em_gss_pln:*
                                                                                     em_gss_hum:*
                                                                                               gb_gss:*
                                                                                                        em_estfun:*
em_estom:*
                                                                                                                            gb_est5:*
                                                                                                                                      gb_est4:*
                                                                                                                                               gb_est3:*
                                                                                                                                                         gb_htc:*
                                                                                                                                                                   gb_est2:*
                                                                                                                                                                                                                                                                                                                          2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GenCore version 5.1.3 (c) 1993 - 2002 Compus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2002,
                                                                                                                                                                                                                                                                                                                                                                                                                                                            12:21:25 ; Search time 3225 Seconds (without alignments)
18385.016 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Compugen Ltd
                                                                                                                                                                                                                                                                                                                                                      32308132
```

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Query

æ

Result No.		Query Match	Query Match Length DB	80	ID	Description
ב	1 3543.2	96.8	5198	1	96.8 5198 11 AK004743	AK004743 Mus muscu
N	834.4	22.8	907	13	BI410257	BI410257 602966247
u	783.2	21.4	858	13	BI653998	BI653998 603280061
4	737.6	20.1	939	9	AL583041	AL583041 AL583041
ر ن	723.4	19.8	932	14	BQ956845	BQ956845 AGENCOURT
6	720.2	19.7	750	14	BQ571422	BQ571422 UI-M-FC0-

5	4.3	42	41	40	39	38	37	36	35	34	3	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	5	15	14	13	12	11	0	9	æ	7
605.6	98	09.	12.	13.	15.	19.	20.	22.	23.	25.	27.	27.	27.	27.	w	31.	32.	32.	635.2	43.	σ	•	53.	UT.	55	56.	•	70.	79.	79.	00.	709	09.		13.	\vdash	
16.5	, 6	6	6.	6	σ.	5	6.	7.	7	7.	7.	7	7.	7.	7	7.	7.	7.	7.	7.	7.	7.	7.	7.	7.	7.	8	œ	8	8	9	9	9.	9.	9	9.	9.
999	١N	ω	4	'n	1.3	4	N)	\sim	\sim	4	(4)	S	S	\sim	3	S	7	(J	895	\mathbf{L}	æ	$\mathbf{-}$	ίЛ	æ	LЛ	LI	N	N	a)	w	w	Ð	Q)	9	\sim	w	σn .
14 14	14	13	13	12	13	12	12	12	12	12	12	13	13	14	12	12	14	13	14	13	13	12	13	14	14	14	12	12	14	13	9	12	13	13	13	14	13
BQ674571	07122	126	M5525	F1357	16542	F5385	F5343	1408	657	47]	318	469	712	202	647	650	372	717	BQ880152	749	11558	F5365	4608	Q9577	4344	9194	7609	5357	586	M4501	54653	5381	I1562	16534	15590	Q9429	6658
BQ674571 AGENCOURT	12276 AC	I112614 60290	M552590 A	F135735 60178	1654243 60328	F538533 60205	F534390 60204	140880 60178	765764 60273	747161 60270	831878 60276	6956 60327	871292 60339	20295 AGENO	64784 60177	65078 60177	37202 AGENO	71747	80152 AG	74958 AGENCOUR	I155838 6029041	36510 60	60816 AGENCOUR	57718 AGENCOUR	34434 A	19467 A	509	35752 60	58694 AGENCOU	M450184 AGI	546537 AL546!	538167 6020!	1156248 60290	1653422 60330	1559061 60324	42930 AGENCOUR	I665846 60

ALIGNMENTS

REFERENCE AUTHORS TITLE JOURNAL RESULT 1 AK004743 REFERENCE REFERENCE SOURCE KEYWORDS VERSION ACCESSION DEFINITION LOCUS JOURNAL MEDLINE PUBMED MEDLINE PUBMED TITLE ORGANISM AUTHORS Meth. Enz 99279253 10349636 Carninci,P. and Hayashizaki,Y.
High-efficiency full-length cDNA cloning
Meth. Enzymol. 303, 19-44 (1999) AK004743.1 GI:12836146
HTC; CAP trapper.
Mus musculus (strain:C57BL/6J) adult clone_lib:RIKEN full-length enriched Carninci, P., Shibata, Y., Hayatsu, N., Sugahara, Y., Shibata, K., Itoh, M., Konno, H., Okazaki, Y., Muramatsu, M. and Hayashizaki, Y., Muramatsu, M. and Hayashizaki, Y. Normalization and subtraction of cap-trapper-selected cDNAs to prepare full-length cDNA libraries for rapid discovery of new control of the control of AK004743 5198 bp mRNA linear HTC 19-JAN Mus musculus adult male lung cDNA, RIKEN full-length enriched Genome Res. 20499374 Eukaryota; Metazoa; Mammalia; Eutheria; Mus musculus library, clone:1200013G06:myosin Ic, full insert sequence. AK004743 clone:1200013G06. 11042159 10 (10), 1617-1630 (2000) Chordata; Craniata; Vertebrata; Euteleostomi; Rodentia; Sciurognathi; Muridae; Murinae; Mus male 1 e cDNA cDNA to mRNA, A library HTC 19-JAN-2002 genes Mus.

AUTHORS

REFERENCE AUTHORS

JOURNAL MEDLINE

PUBMED

11076861

```
2E 5 (bases 1 to 5198)

8S Adachi, J., Aizawa, K., Akahira, S., Akimura, T., Aono, H., Arai, A., Arakawa, T., Baldarelli, R., Bono, H., Brownstein, M., Bult, C., Carninci, P., Fukuda, S., Fukunishi, Y., Furuno, M., Hanagaki, T., Hume, D., Imotani, K., Ishii, Y., Itoh, M., Izawa, M., Kasukawa, T., Kato, H., Kawai, J., Kojima, Y., Konno, H., Kouda, M., Koya, S., Nurihara, C., Matsuyama, T., Miyazaki, A., Nishi, K., Nomura, K., Numazaki, R., Ohno, M., Okazaki, Y., Okido, T., Owa, C., Quackenbush, J., Saito, H., Saito, R., Sakai, C., Sakai, K., Sono, H., Sasaki, D., Sogabe, Y., Suzuki, H., Tagami, M., Tagawa, A., Takahashi, F., Tanaka, T., Tejima, Y., Toya, T., Yamamura, T., Yamanaka, I., Yasunishi, A., Yoshida, K., Yoshino, M., Muramatsu, M., and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Arakawa, T., Shinagawa, A., Shibata, K., Yoshino, M., Itoh, M., Ishii, Y., Arakawa, T., Hara, A., Fukunishi, Y., Konno, H., Adachi, J., Fukuda, S., Alzawa, K., Izawa, M., Nishi, K., Kiyosawa, H., Kondo, S., Yamanaka, I., Saito, T., Okazaki, Y., Gojobori, T., Bono, H., Kasukawa, T., Saito, R., Kadocta, K., Matsuda, H., Ashburner, M., Batalov, S., Casavant, T., Fleischmann, W., Gaasterland, T., Gissi, C., King, B., Kochiwa, H., Kuehl, P., Lewis, S., Matsuo, Y., Nikaido, I., Pesole, G., Vuackenbush, J., Schriml, L.M., Staubli, F., Suzuki, R., Tomita, M., Wagner, L., Washio, T., Sakai, K., Okido, T., Furuno, M., Aono, H., Carolnoi, P., de Bonaldo, M.F., Brownstein, M.J., Bojunga, N., Fletcher, C., Fujita, M., Gariboldi, M., Gustincich, S., Hill, D., Hofmann, M., Hume, D. A., Kamiya, M., Lee, N. H., Lyons, P., Nordone, P., Stochima, J., Mashima, J., Mazzarelli, J., Mombaerts, P., Nordone, P., Sato, K., Schombach, C., Seya, T., Shibata, Y., Storch, K.F., Suzuki, H., Wynshaw-Boris, A., Yoshida, K., Hasegawa, Y., Kawaji, H., Kohtsuki, S., Functional annotation of a full-length mouse cDNA collection and the collection of the collection o
                                                                                                                   Submitted (10-JUL-2000) Yoshihide Hayashizaki, The Institute of Physical and Chemical Research (RIKEN), Laboratory for Genome Exploration Research Group, RIKEN Gemomic Sciences Center (GSC), RIKEN Yokohama Institute; 1-7-22 Suehiro-cho, Tsurumi-ku, Yokohama Anstitute; 1-7-22 Suehiro-cho, Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japan (E-mail:genome-res@gsc.riken.go.jp, URL:http://genome.gsc.riken.go.jp/, Tel:81-45-503-9222, Fax:81-45-503-9216)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Please visit our web site (http://genome.gsc.riken.go.jp/) for further details.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Shibata, K., Itoh, M., Aizawa, K., Nagaoka, S., Sasaki, N., Carninci, P., Konno, H., Akiyama, J., Nishi, K., Kitsunai, T., Tashiro, H., Itoh, M., Sumi, N., Ishil, Y., Nakamura, S., Hazama, M., Nishine, T., Harada, A., Yamamoto, R., Matsumoto, H., Sakaguchi, S., Ikegami, T., Kashiwagi, K., Yoneda, Y., Inoue, K., Togawa, Y., Izawa, M., Ohara, E., Watehiki, M., Yoneda, Y., Ishikawa, T., Ozawa, K., Tanaka, T., Matsuura, S., Kawai, J., Okazaki, Y., Muramatsu, M., Inoue, Y., Kira, A. and Haysahizaki, Y., Okazaki, Y., Muramatsu, M., Inoue, Y., Kira, A. and Haysahizaki, Y., Sequencing pipeline with 384 multicapillary sequencer Genome Res. 10 (11), 1757-1771 (2000)
                                                                                                    Cloning sites,
                                                                                                    3' end:
                                                                                                                                                        Ъ
                                                                                                                                                                                                                       Ωy
                                                                                                                                                                                                                                                                                                  Вb
                                                                                                                                                                                                                                                                                                                                                                 Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches 3591;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
282 GTGGTGTCAGTTTCTATGAAGTACCACCTCATTTGTTTGCAGTGGCTGACACTGTATACC
                                                                                                                   265 TCTCTGTCAATCCCTACCGAGACCTACAGATCTACAGCCGGCAGCATATGGAACGCTACC
                                                                                                                                                                                                                       222
                                                                                                                                                                                                                                                                                                  205
                                                                                                                                                                                                                                                                                                                                                                     162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           polyA_site
                                                                                                                                                                                                                                                                                                                                                                                                                                       102 GGGTAGGGGTGCAGGACTTTGTĆCTGCTGGAGAATTTCACCAGTGAGGCTGCCTTCATTG 161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                polyA_signal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    85 CGGCCTTGGGCAGTGACGGGTTCGAGTGACCATGGAGAGCGCCTTGACTGCCCGAGACC 144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             42 CGGCCCTGGGCAGTGACGGGGTTCGAGTGACCATGGAGAGCGCCTTGACTGCCCGAGACC 101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  source
                                                                                                                                                        TCTCTGTCAATCCCTACCGAGACCTACAGATCTACAGCCGGCAGCATATGGAACGCTACC
                                                                                                                                                                                                                                                         AGAACCTCCGGCGGTTCCGGGAGAACCTCATTTATACCTACATCGGTCCTGTCCTAG
                                                                                                                                                                                                                                                                                                  AGAACCTCCGGCGGTTCCGGGAGAACCTCATTTATACCTACATCGGTCCTGTCCTAG
                                                                                                                                                                                                                                                                                                                                                                                                  GGGTAGGGGTGCAGGACTTTGTCCTGCTGGAGAATTTCACCAGTGAGGCTGCCTTCATTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ISGESGAGKTEATRILLOYS ASTICAPREBGGAVED FLAGSEN AND ALLARMAN A SERGKYMNYGFDERGAPVOGHILSYLLEKSRVVHONHGERNEHVEYQLLEGGEEETLR RIGHERNOSYLYLKGQCAKVSSINDKSDMKVRRKALSYDDFTEDEVEDLLSTVASV LLLCANIHFAADEDSNAQVTTENQLKYLTPELLGVEETTLREALTHRKIIAKGEELLSPL HLLCANIHFAADEDSNAQVTTENQLKYLTPELLGVEETTLREALTHRKIIAKGEELLSPL HOHNSFEQFELVEKLOOLFIELTLKSSOESTARETYLGLLDIYGFEY LOLLSYLEFELFOLHSVERETYLGLLDIYERLYKKINRSLASKDAESPSWRSTYLGLLDIYGFEY KKGIISILDECLRPGEATLTFELKLEDTVKPHPELTHKLADOKTRKSLDRGEER KFKGIISILDECLRPGEATLTFELKLEDTVKPHPELTHKLADOKTRKSLDRGEER LIHYAGEVTYSVTGFLLMNNDLLFRNLKETMCSSMNPIMAQCFDKSELSDKRPETVA AGFAYRKYEAFLOXYKSLFYRCIK FORDAYINGLARHAYKYA AGFAYRKYEAFLOXYKSLOATKIQAMRGFFHROKFLDYVKRSALCIOSWRGTIKSIF RKAKKMAAQTIRRLINGFTORSTATANADAUNAGESPROGOLOOKAVASELFKKNIPOS VERLFISTRLINGFILRHSPRCPENAFTLDYVKRSELKHRROLFRNVLDTSW VERLFISTELSFRVLOSLGSEPTQYANPVKYDRKGYKPRPQLLLTPSAVVI LSANROHNURGTISTSSUSDSLEVRGOLOOKAVASELFKKRPROLLTPSAVVI LSANROHNURGTSSSSLSDSLFVLHVOREDNKOKGDVLOSDHVIETLTFATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /note="putative"
1365 c 1442 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /note="putative"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /gene="Myolc"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /protein_id="Bab23524.1"
/db_xref="GI:12836147"
/db_xref="MGD:MGI:106612"
/td_xref="MGD:MGI:106612"
/translation="MESALTARDRVGVODFVLLENFTSEAAFIENLRRFERENLIYTY
IGPVLVSVNPYRDLQIYSRQHMERYRGVSFYEVPPHLFAVADTYYRALRTERRDQAVM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     putative"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          myosin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        evidence: ISS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /gene="Myo1c"
117. .3203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /organism="Mus musculus"
/strain="C57BL/6J"
/db_xref="RANTOM_DB:1200013G06"
/db_xref="MGD:MGI:1904347"
/db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /tissue_type="lung"
/clone_lib="RIKEN f;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  'note="data
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /gene="Myo1c"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /dev_stage="adult"
1. .5198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /clone="1200013G06"
/sex="male"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  96.8%;
99.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 3543.2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       source:MGD, source key:MGI:106612
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     _full-length enriched mouse cDNA library"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 11; Length 5198;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
```

REFERENCE AUTHORS

PUBMED

TITLE JOURNAL MEDLINE

COMMENT

JOURNAL TITLE

4 ; Gaps

341 324 221

204

281

DD 04 DD 05 DD 05

1421 1464	GCATCGCGTGGGAACCTGTCCAGTACTTCAACAACAACATCATCTGTGACCTGGTAGAGG	1405
	TGCAGCAGCTCTTCATCGAGCTGACTCTCAAGTCGGAGCAGGAGGAATACGAGGCTGAGG THITTITTTTCATCGAGCTGACTCTCAAGTCGGAGCAGGAGGAATACGAGGCTGAGG TGCAGCAGCTCTTCATCGAGCTGACTCTCAAGTCGGAGCAGGAGGAATACGAGGCTGAGG	4 0
1301 1344	TTGAAGTGTTTCAGCATAACAGCTTCGAGCAGTTCTGCATCAACTACTGCAATGAGAAGC	1242 1285
1241 1284	ACGCTGAGAGCCCCAGCTGGCGAAGCACCACGGTTCTTGGGCTCCTGGACATTTACGGCT	1182 1225
1181 1224	TGTACAGCCGGACATTCACCTGGCTGGTCAGAAAGATCAATAGGTCACTGGCCTCTAAGG	1122 1165
1121 1164	TCCTGAGCCCACTGAACCTTGAACAGGCGGCATATGCAAGGGATGCGCTTGCCAAGGCTG	1062 1105
1061 1104	AAGGTACAACACTTAGGGAAGCCCTGACCCACAGGAAGATCATCGCCAAAGGGGGAAGAGC :	1002
1001 1044	GCAATGCCCAGGTTACTACTGAGAACCAGCTCAAATATCTGACCAGGCTCCTTGGTGTGG	942 985
941 984	TCAGCATCGTGGCCAGCGTCCTACATCTGGGCAACATCGACTTTGCTGACGAGGACA	882 925
881 924	AGGTTATGAGGAAGGCGCTGTCCGTCATTGACTTCACTGAGGATGAAGTGGAGGACTTGC (822 865
821 864	TGTACCTGGTGAAGGGCCAGTGTGCCAAGGTCTCCTCCATCAACGACAAGAGTGACTGGA (
761 804	AGGGGGGCAGGAGAGACTCTCCGTCGGCTGGGCTTGGAACGGAACCCCCAGAGCTACT	
701 744	CCCGGGTGGTGCACCAAAATCACGGAGAGCGGAACTTCCACGTCTTTTACCAGCTACTGG CILIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	642 685
641 684	AGTITGACTICAAGGGTGCCCCCGTGGGAGGCCACATICTCAGTIACCTCCTGGAAAAGI (582 625
581 624	GGAATGCCAAGACTCTCCGCAACGATAACTCCAGCCGGTTTGGAAAGTACATGGATGTGC :	522 565
521 564	AACGGGGTGGCGCAGTGCGAGACCGCCTGTTGCAGAGCAACCCCGTGTTAGAGGGCCTTTG	462 505
461 504	GCAAGACAGAGGCCACCAAGAGACTGCTCCAGTTCTATGCAGAGACCTGCCCAGCCCCTG 4	402 445
401 444	GGGCACTTCGTACTGAGCGTCGGGACCAGGCAGTGATGATTTCTGGAGAGAGTGGGGCAG 4	342 385
384	GTGGTGTCAGTTTCTATGAAGTACCACCTCATTTGTTTGCAGTGGCTGACACTGTATACC	325

Оу Оу Оу

ОУ ОУ

2544	CCCGGAATGTTCTGGACACCTCCTGGCCCACACCCCCACCTGCCCTGAGAGAGGCCTCAG	4	Db
2500	CCCGGAATGTTCTGGACACCTCCTGGCCCACACCCCCACCTGCCCTGAGAGAGGGCCTCAG	2441	Qy
2484	ATGCCTTCTTGTTGGACCACGTGCGCGCCTCATTTTTGCTTAACCTGAGGCGGCAACTGC		Дb
2440	ATGCCTTCTTCTTGGACCACGTGCGCGCCTCATTTTTGCTTAACCTGAGGCGCGAACTGC	w	Qy
2424	AGACCATCCGTCGACTCATCCGTGGCTTCATTTTGCGCCATTCACCCCGGTGCCCTGAGA	2365	Db
2380	AGACCATCCGTCGACTCATCCGTGGCTTCATTTTGCGCCATTCACCCCGGTGCCCTGAGA		QУ
2364	AGTCATGGTGGCGTGGCACACTGGGCCGGAGGAAGGCCAGCCA	ω	DЬ
2320	AGTCATGGTGGCGTGGCACACTGGGCCGGAGGAAGGCAGCCAAGAGGAAGTGGGCAGCCC	26	Qy
2304	GAGGGGCTTTCATTGGCGACAGAAATTTCTCCGGGTGAAGCGATCAGCCATCTGTATCC	2	Db
2260	GGAGGGGCTTTCATTGGCGACAGAAATTTCTCCGGGTGAAGCGATCAGCCATCTGTATCC	20	Qy
2244	CCACAGAGGACTCCCTGGAAGTCCGGCGGCAGAGTCTAGCCACCAAGATCCAGGCGGCCT	2185	Db
2200.	CCACAGAGGGCTCCCTGGAAGTCCGGCGGCAGAGTCTAGCCAACAAGATCCAGGCGGCCT	14	Qy
2184	CAGAAGAGTACAAAATGGGCAGGACTAAGATCTTCATCCGATTTCCCAAGACCTTGTTTG	\vdash	Db
2140	CAGAAGAGTACAAAATGGGCAGGACTAAGATCTTCATCCGATTCCCCAAGACCTTATTTG	2081	Qy
2124	TGTGGGCAGGACGGCCCCAGGATGGTGGGCCGTGTTGGTCAGACACCTCGGCTACAAGC	2065	DЪ
2080	GTGGGCAGGACGGCCCCAGGATGGTGGTGGCCGTGTTGGTCAGACACCCTCGGCTACAAGC	0	Qy
2064	GTCGCAAATATGAGGCTTTCCTGCAGAGGTACAAGTCACTGTGCCCAGAGACATGGCCCA	C	Db
2020	GTCGCAAATATGAGGCTTTCCTGCAGAGGTACAAGTCACTGTGCCCAGAGACATGGCCCA	1961	Qy
2004	AGGTGAAGTACCTGGGACTGATGGAGAATCTGCGCGTGCGCAGAGCTGGCTTTGCCTATC	S	дb
1960	AGGTGAAGTACCTGGGACTGATGGAGAATCTGCGCGTGCGCAGAGCTGGCTTTTGCCTATC	LO.	Qy
1944	GCATCAAGCCAAACGACGCCAAGCAGCCGGTCGCTTTGATGAGGTGCTCATCCGACATC	œ	рь
1900	GCATCAAGCCAAACGACGCCAAGCAGCCGGGTCGCTTTGATGAGGTGCTCATCCGACATC	œ	Qy
1884	AGATGAGCCTCCTGCAGCTCGTGGAGATCCTGAGGTCTAAGGAGCCTGCCT	1825	Db
1840	AGATGAGCCTCCTGCAGCTCGTGGAGATCCTGAGGTCTAAGGAGCCTGCCT	78	Qy
1824	GCTTTGACAAGAGTGAGCTCAGTGACAAGAAGCGGCCAGAGACGGTGGCCACCCAGTTCA	1765	Дb
1780	GCTTTGACAAGAGTGAGCTCAGTGACAAGAAGCGGCCAG-GACGGTGGCCACCCAGTTCA	1722	Qy
1764	TCCTCTTCCGGAACCTGAAGGAGACCATGTGCAGCTCAATGAACCCCATCATGGCCCAGT	1705	Дb
1721	TCCTCTTCCGGAACCTGAAGGAGCACCATGTGCAGCTCAATGAACCCCCATCATGGCCCAG		Qy
1704	TGCATTATGCTGGAGAGGTGACCTACAGTGTGACTGGGTTTCTGGATAAAAACAATGACC		Db
1661	GCATTATGCTGGAGAGGTGACCTACAGTGTGACTGGGTTTCTGGATAAAAACAATGAC	1602	Qy
1644	GGCACAAGCTCGCTGACCAGAAGACCAGGAAATCTCTAGACCGAGGGGAGTTCCGCCTTC	Ġ	Db
1601	CGCACAAGCTCGCTGACCAGAAGACCAGGAAATCCCTAGACCGAGGGGAGTTCCGCCT	4	Qy
1584	CGGACCTGACCTTCTGGAGAAGTTGGAGGACACTGTCAAGCCCCACCCTCACTTCCTGA	G	Db
1541	CGGACCTGACCTTTCTGGAGAAGTTGGAGGACACTGTCAAGCCCCACCCTCACTTCCTGA	8	Qy
1524	AGAAGTTCAAGGGCATCATCTCCATCTTGGATGAAGAGTGCCTGCGTCCTGGGGAGGCCA	1465	Db
1481	AGAAGTTCAAGGGCATCATCTCCATCTTGGATGAAGAGTGCCTGCGTCCTGGGGAGGCCA		Qy

```
3581
                                                                                                                       3461
                                                                                                                                                    3444
                                                                                                                                                                                3401
                                                                                                                                                                                                              3384
                                                                                                                                                                                                                                                                         3324
                                                                                                                                                                                                                                                                                                                                                                                                                         3161
                                                                                                                                                                                                                                           3341
                                                                                                                                                                                                                                                                                                      3281
                                                                                                                                                                                                                                                                                                                                                               3221
                                                                                                                                                                                                                                                                                                                                                                                              3205
                                                                                                                                                                                                                                                                                                                                                                                                                                                      3145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3085
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3041
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3025
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2981
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2965
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2921
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2905
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2861
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2845
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2801
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2785
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2741
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2725
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2681
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2665
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2621
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2605
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2545
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2561
                                                                                                                                              GCAAACTCCTGCCTTCTGCTCGCCCCCTCTTGAGGTGATCAGGAGCCAGGGAGCTACCCC
                                                                                                                                                                                                                                                                                                                                                GACTTACCAAAAACTCAAGCTTCCAAACAGGGATCCATGGACACCCTCAAAACCCCACGCT
                                                                                                                                                                                                                                                                                                                                                                                                           GAAGGCTGCGGTGGACCGCTCCTGACTCCTGATGCTTCCCTTAGTCCCCTCCTCCCCCCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                TCACCAAGGCTAAGAATGGCCACCTGGCTGTGGTGGCCCCACGGCTGAATTCTCGGTGAT
GCTGGGCTGGAAGGTCCTCT--TCTTGGCCAACCCTTCCTTATTCCCTTGTCTGCCTGTC
                                           ATGAGTGGGCCAGGCCGGGCCACAGCAATAGAAAAGCAGAGGCCTGAGCAGGCCAGGCCA
                                                                                                                                                                                                                                     ATGAGTGGGCCAGGCCGGGCCACCACCAATAGAAAAAGCAGAGGCCTGAGCAGGCCAGGCCA 3400
                                                                                                                                                                                                                                                                      GCAAACTCCTGCCTCCTCCCCCCCCCCCCCCCAGGGAGCCAGGGAGCTACCCC
                                                                                                                                                                                                                                                                                                                               CAGTTACCAAAGACTCAAGCTTCCAGACAGGGATCCATGGACACCCTCAAAACCCCAC-CT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AGACGGCCCTCAGTGCTGACCGCGTGAACAATATCAACATCAACCAGGGCAGCATAACGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CTGAGTGGAAGCAGCAGCTGCAGCAAAAGGCGGTGGCTAGTGAAATTTTCAAGGGCAAGA
                             TTTTTTGATGCTTTATAGGAAACTATTTTTTAAGAAAGCCATTTTCCTACCCTAAACAC
                                                                                                                                                                                                                                                                                                                                                                                          GAAGGCTTCAGTGGACCCCTCCTGACTCCTGATGCTTCGCTTAGTCCCCTCCTCCCCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CCGGAATCTCTGTCAGTAGCCTGAGTGATAGCCTATTTGTGCTTCACGTGCAGCGTGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GTGCTGTGGTCATTGTGGAGGATGCTAAAGTCAAGCAGAGAATTGATTATGCCAACCTAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TGGTAAAATACGACCGTAAGGGTTACAAGCCTCGCCCCCGGCAGCTGCTGCTCACGCCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AGATCAGCCCCAGAGTGCTTCAATCCTTGGGCTCTGAACCCATCCAGTATGCCGTGCCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AACTGCTACGGGAACTGTGCATGAAGAACATGGTGTGGAAGTACTGCCGGAGCATCAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCACCAAGGCTAAGAATGGCCACCTGGCTGTGGTGGCCCCACGGCTGAATTCTCGGTGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCGGAATCTCTGTCAGTAGCCTGAGTGATAGCCTATTTGTGCTTCACGTGCAGCGTGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GTGCTGTGGTCATTGTGGAGGATGCTAAAGTCAAGCAGAGAATTGATTATGCCAACCTAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AGGACAACTACCCCCAGAGTGTCCCCCAGACTCTTCATTAGCACACGGCTTGGCACAGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TGGTAAAATACGACCGTAAGGGTTACAAGCCTCGCCCCGGCAGCTGCTGCTCACGCCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AGATCAGCCCCAGAGTGCTTCAATCCTTGGGCTCTGAACCCCATCCAGTATGCCGTGCCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AGGACAACTACCCCCAGAGTGTCCCCCAGACTCTTCATTAGCACACGGCTTGGCACAGAGG
                                                                                                                    3520
                                                                                                                                                                                                           3443
3638
                             3623
                                                         3580
                                                                                      3563
                                                                                                                                                                                                                                                                                                 3340
                                                                                                                                                                                                                                                                                                                                                                                          3264
                                                                                                                                                                                                                                                                                                                                                                                                                      3220
                                                                                                                                                                                                                                                                                                                                                                                                                                                   3204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3040
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2980
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2904
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2860
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2800
                                                                                                                                                                                                                                                                                                                                                              3280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3084
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3024
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2964
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2920
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2784
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2740
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2680
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2664
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2620
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2604
```

B 6

Вb Š В Š В δ В Š 망 õ Д Š В Š 밁 Š 망 S

5 B

oy D

```
RESULT 2
BI410257
LOCUS
                                                                  Qγ
              Qy
                                          В
                                                                                                Ъ
                                                                                                                        Ωy
                                                                                                                                                                                                                ORIGIN
                                                                                                                                                                                                                           BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AUTHORS
TITLE
                                                                                                                                                       Matches 877;
                                                                                                                                                                    Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM
                1593
                                                                                                             1473 GGGAGGCCACGGACCTGTCCTGGAGAAGTTGGAGGACACTGTCAAGCCCCACCCTC 1532
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3684
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                source
                                           69
                                                                                                 9
TCCGCCTTCTGCATTATGCTGGAGAGGGGACCTACAGTGTGACTGGGTTTCTGGATAAAA
                                                                    ACTTCCTGACGCACAAGCTCGCTGACCAGAAGACCAGGAAATCCCTAGACCGAGGGGAGT 1592
                                          ACTTCCTGACGCACAAGCTCGCTGACCAGAAGACCAGGAAATCTCTAGACCGAGGGGAGT
                                                                                                GGGGACGCACGGATCTGACCTTTCTGGAGAAGTNGGAGGACACTGTCAAGCCCCACCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CATCCACCTGCACCTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CATCCACCTGCACCTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       found through the I.M http://image.llnl.gov Plate: LLAM11296 row
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     mRNA sequence
BI410257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Gilbert Smith,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Unpublished (1999)
Contact: Robert St
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian
                                                                                                                                                                    Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Bonaldo, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; I
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BI410257.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              602966247F1 NCI_CGAP_Lu33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DNA Sequencing by:Incyte Genomics, Inc. Clone distribution: NCI-CGAP clone distribution found through the I.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              house mouse.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   cDNA Library Preparation: M. Bento
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (bases 1 to
                                                                                                                                                                                                                           216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            quality sequence start: 5 quality sequence stop: 852.
Location/Qualifiers
                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                      Double-stranded cDNA was ligated to Eco RI adaptors (Pharmacia), digested with Not I and cloned into the Not I and Eco RI sites of the modified pT773 vector. Library went through one round of normalization, and was constructed by Bento Soares and M. Fatima Bonaldo. " 245 c 267 g 177 t 2 others
                                                                                                                                                                    22.8%;
97.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      907)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Strausberg,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3701
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3656
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     row: n column:
                                                                                                                                                       0;
                                                                                                                                                                   Score
Pred.
                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            907 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mus
                                                                                                                                                                   834.4; DB
No. 5e-203;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ph.D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Soares,
                                                                                                                                                       18;
                                                                                                                                                                                13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gene
                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            linear
                                                                                                                                                                                Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ph.D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Collection
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               information
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EST 14-AUG-2001
IMAGE:5121610 5',
                                                                                                                                                                                   907;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Euteleostomi;
; Murinae; Mus
                                                                                                                                                      ω,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Fatima
                                                                                                                                                    Gaps
              1652
                                          128
                                                                                                68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               can
                                                                                                                                                       w
-:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               be
```

```
RESULT 3
BI653998
                                                                                                                                                    VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                          Q
                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                               Ŷ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ър
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δÕ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              20
                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                           οy
                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                         COMMENT
                                                                                                 REFERENCE
                                                                                                                                           SOURCE
                                                                                                                                                                                            DEFINITION
                                                                                                                                                                                                        LOCUS
                                                                                                                                                                         ACCESSION
                                                                           AUTHORS
TITLE
                                                                 JOURNAL
                                                                                                                                ORGANISM
                                                                                                                                                                                                                                                                                2311
                                                                                                                                                                                                                                                                                                                                                                2192
                                                                                                                                                                                                                                                                                                                                                                                                        2132
                                                                                                                                                                                                                                                                                                                                                                                                                                                 2072
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1772
                                                                                                                                                                                                                                                                                                                       2252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2012
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1952
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1892
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1832
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1713
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1653
                                                                                                                                                                                                                                                                                                                                                                                                                            609
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                489
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             189
                                                                                                                                                                                                                                                                                                   789
                                                                                                                                                                                                                                                                                                                                            729
                                                                                                                                                                                                                                                                                                                                                                                     669
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       549
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     129
                                                                                                                                                                                                                                                           849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCTACAAGCCAGAAGAGTACAAAATGGGCAGGACTAAGATCTTCATCCGATTCCCCAAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TTGCCTATCGTCGCAAATATGAGGCTTTCCTGCAGAGGTACAAGTCACTGTGCCCAGAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TGGCCCAGTGCTTTGACAAGAGTGAGCTCAGTGACAAGAAGCGGCCAG-GACGGTGGCCA 177:
                                                                                                                                                                                                                                                                                                           TCTGTATCCAGTCATGGTGGCGTGGCACACTGGGCCGGAGG-AAGGCAGCCAAGAGGGAAG 2310
                                                                                                                                                                                                                                                                                                                                                      AGGCGGCCTGGAGGGGCTTTCATTGGCGACAGAAATTTCTCCCGGGTGAAGCGATCAGCCA 2251
                                                                                                                                                                                                                                                                                                                                                                                                                            GCTACAAGCCAGAAGAGTACAAAATGGGCAGGACTAAGATCTTCATCCGATTTCCCAAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACAATGACCTCCTCTTCCGGAACCTGAAGGAGACCATGTGCAGCTCAATGAACCCCATCA 1712
                                                                                                                                                                                                                                                                                                 TCTGTATCCAGTCATGGTGGCGTGGCACACTGGGCCGGAGGAAAGGCAGCCAAGAGGAAG
                                                                                                                                                                                                                                                                                                                                                                                    CCTTGTTTGCCACAGAGGACTCCCTGGAAGTCCGGCGGCAGAGTCTAGCCACCAAGATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TGGCCCAGTGCTTTGACAAGAGTGAGCTCAGTGACAAGAAGCGGCCAGAGACGGTGGCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACAATGACCTCCTCTCCGGAACCTGAAGGAGACCATGTGCAGCTCAATGAACCCCCATCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TCCGCCTTCTGCATTATGCTGGAGAGGTGACCTACAGTGTGACTGGGTTTCTGGATAAAA
                                                                                                                                                                                                                                                                                                                                           AGGCGGCTGGAAGGGGCTTTCATTGGCGACAGAATTTCTCCGGGTGAAGCGATCAGCCA
                                  Email:
Tissue
             Ph.D.
                                          Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
                                                                                              Eukaryota; Metazoa;
Mammalia; Eutheria;
1 (bases 1 to 858)
                                                                                                                                                                         mRNA sequence
BI653998
                                                                                                                                                                                          B1653998 858 bp mRNA 603280061F1 NCI_CGAP_Mam4 Mus musculus
                                                                         NIH-MGC http://mgc.nci.nih.gov.
National Institutes of Health,
                                                                                                                               Mus musculus
                                                                                                                                                     EST
                                                                                                                                                               BI653998.1 GI:15568234
                                                                                                                                           house mouse
  Library Preparation:
Library Arrayed by: T
                                  Procurement:
                                                                                                          Chordata;
Rodentia;
                                   Lothar
   The I.M.A.G.E. Conso
                                  Hennighausen
                                                                                     .gov/.
                                                                                                         Craniata; Vertebrata; |
Sciurognathi; Muridae;
                                                                           Mammalian
                                                                                                                                                                                                       mRNA
Ħ
                                                                                                                                                                                            cDNA clone IMAGE:5310422 5',
                                Ph.D.,
                                                                           Gene
    Consortium
                                                                          Collection
                                   Priscilla
                                                                                                                    Euteleostomi;
                                                                                                          Murinae;
                                                                                                                                                                                                                                                           906
                                    Furth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              548
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            248
                                                                                                                                                                                                                                                                                                                                                                                  728
                                                                                                                                                                                                                                                                                                                                                                                                                            668
                                                                                                                                                                                                                                                                                                                                                                                                                                                2131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2071
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2011
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    188
                                                                                                                                                                                                                                                                                                                                           788
                                                                                                                                                                                                                                                                                                                                                                                                        2191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      809
```

```
Qy
                                                       DЬ
                                                                              Qy
                                                                                                            В
                                                                                                                                    Q
                                                                                                                                                                  DЪ
                                                                                                                                                                                           Qy
                                                                                                                                                                                                                      DЪ
                                                                                                                                                                                                                                                δõ
                                                                                                                                                                                                                                                                            DЬ
                                                                                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                                                                                  рь
                                                                                                                                                                                                                                                                                                                                                         δõ
                                                                                                                                                                                                                                                                                                                                                                                     Вþ
                                                                                                                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local S
Matches 831
                                                                                                                                                                                              1935
                                                                                                                                                                                                                                                                                                         1815
                                                                                                                                                                                                                                                                                                                                                            1756
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1516
                             2115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1636
                                                                                  2055
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1576
                                                                                                                                                                                                                                                                                                                                                                                                                9691
                                                        541
                                                                                                             481
                                                                                                                                        .995
                                                                                                                                                                   421
                                                                                                                                                                                                                         361
                                                                                                                                                                                                                                                 .875
                                                                                                                                                                                                                                                                            301
                                                                                                                                                                                                                                                                                                                                  241
                                                                                                                                                                                                                                                                                                                                                                                       181
                                                                                                                                                                                                                                                                                                                                                                                                                                            121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ب
CATCCGATTCCCCAAGACCTTATTTGCCACAGAGGACTCCCTGGAAGTCCGGCGG-CAGA
                                                                  GTTGGTCAGACACCTCGGCTACAAGCCAGAAGAGTACAAAATGGGCAGGACTAAGATCTT
                                                                                                                                                                                                                                                                            GCCAG-GACGGTGGCCACCCAGTTCAAGATGAGCCTCCTGCAGCTCGTGGAGATCCTGAG
                                                                                                                                                                                                                                                                                                                                                                                                  CTCAATGAACCCCATCATGGCCCAGTGCTTTGACAAGAGTGAGCTCAGTGACAAGAAGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGGGTTTCTGGATAAAAACAATGACCTCCTCTTCCGGAACCTGAAGGAGACCATGTGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GTAGGTCAGACACCTCGGCTACAAGCCCAGAAGAGTACAAAATGGGCAGGACTAAGATCTT
                                                                                                             GTCACTGTGCCCAGAGACATGGCCCATGTGGGCAGGACGGCCCCAGGATGGTGGCCGT
                                                                                                                        GTCACTGTGCCCAGAGACATGGCCCATGTGGGCAGGACGGCCCCAGGATGGTGTGGCCGT
                                                                                                                                                                              CGTGCGCAGAGCTGGCTTTGCCTATCGTCGCAAATATGAGGCTTTCCTGCAGAGGTACAA
                                                                                                                                                                                                                                    CTTTGATGAGGTGCTCATCCGACATCAGGTGAACTACCTGGGACTGATGGAGAATCTGCG
                                                                                                                                                                                                                                                                                                                                                                                       CTCAATGAACCCCATCATGGCCCAGTGCTTTGACAAGAGTGAGCTCAGTGACAAGAAGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                          TGGGTTTCTGGATAAAAACAATGACCTCCTCTTCCGGAACCTGAAGGAGACCATGTGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TGTCAAGCCCCACCCTCACTTCCTGACGCACAAGCTCGCTGACCAGAAGACCAGGAAATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           831;
                                                                                                                                                                   CGTGCGCAGAGCTGGCTTTGCCTATCGTCGCAAATATGAGGCTTTCCTGCAGAGGTACAA
                                                                                                                                                                                                                        CTTTGATGAGGTGCTCATCCGACATCAGGTGAAGTACCTGGGACTGATGGAGAATCTGCG
                                                                                                                                                                                                                                                                                                      GTCTAAGGAGCCTGCCTATATCCGGTGCATCAAGCCAAACGACGCCAAGCAGCCGGGTCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        found through the I.M.A.G.E. Consohttp://image.llnl.gov
Plate: LLAM11786 row: i column:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            High quality sequence start: 7
High quality sequence stop: 775.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DNA Sequencing by: Incyte Genomics, Clone distribution: MGC clone distri
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            þ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Library constructed by Life Technologies. Investigators providing samples: Lothar Hennighausen/Priscilla Furth, NIH Reference for transgenic model: Li et al., Cell Grow and Differentiation 7, 3-11 (1996)."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /note="Organ: mammary; Vector: pCMV-SPORT6;
Site_2: NotI; Cloned unidirectionally. Prin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /Clone="IMAGE:5310422"
/Clone_lib="NCI_CGAP_Mam4"
/tissue_type="tumor, gross
/dev_stage="5 months"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /organism="Mus musculus"
/strain="NMRI"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1. .858
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      21.4%;
96.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 783.2; I
Pred. No. 6.9e
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 clone distribution information
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Consortium/LLNL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        .9e-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     tissue"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3 13;
190;
23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      at
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Primer:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3,1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      858;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Site_1:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Oligo
                           2173
                                                                                                                                                                                             1994
                                                                                                                                                                                                                                                                                                                                                                                                               1755
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1575
                                                                                 2114
                                                                                                                                       2054
                                                                                                                                                                                                                                                 1934
                                                                                                                                                                                                                                                                                                      1874
                                                                                                                                                                                                                                                                                                                                                          1814
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1695
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1635
                                                       600
                                                                                                             540
                                                                                                                                                                  480
                                                                                                                                                                                                                        420
                                                                                                                                                                                                                                                                                                                                                                                                                                          180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60
                                                                                                                                                                                                                                                                            360
                                                                                                                                                                                                                                                                                                                                  300
                                                                                                                                                                                                                                                                                                                                                                                       240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SalI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                dT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ω
```

밁

```
Дb
                                                              Ş
                                                                                Ъ
                                                                                               δ
                                                                                                                                                     BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                   SOURCE
ORGANISM
                                                                                                                         Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                         FEATURES
                                                                                                                                                                                                                                                                                                                                                           COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                               ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 4
AL583041
1931 TGCGCGTGCGCAGAGCTGGCTTTGCCTATCGTCGCAAATATGAGGCTTTCCTGCAGAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                        KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                              1871
                                                                      1811 TGAGGTCTAAGGAGCCTGCCTATATCCGGTGCATCAAGCCAAACGACGACGCCAAGCAGCCGG 1870
                                                                                                                  tches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                   JOURNAL
                                            61
                                                              1 TGCAGTCTAAGGAGCCCGCCTACGTCCGCTGCATCAAACCCAATGATGCCCAAACAGCCCG
                                                                                                                                                                                                                                                                                                                source
                                    GTCGCTTTGATGAGGTGCTCATCCGACATCAGGTGAAGTACCTGGGACTGATGGAGAATC 1930
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2352
                           GCCGCTTTGACGAGGTGCTGATCCGCCACCAGGTGAAGTACCTTGGGGCTGTTGGAAAACC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2174
                                                                                                                825;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    721
                                                                                                                                                                                                                                                                                                        L1,W.B., Gruber,C., Jessee,J. and Polayes,D.
Full-length cDNA libraries and normalization
Contact: Genoscope
Genoscope Centre National de Sequencage
BP 191 9106 EVRY cedex - France
Email: segref@genoscope.cns.fr, Web : www.genoscope.cns.fr, Web : www.genoscope.cns.fr
                                                                                                                    Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TGGCGGCCATTAACCCGG 858
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TTTGCGCCATTCACCCCG 2369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGGTGAAGCGATCAGCCATCTGTATCCAGTCATGGTGGCGTGGCACACTGGGCCGGAGGA 2293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GGGTGAAGCGATCAGACATCTGTATCCAGTCATGGTGGCGTGGCCACACTGGGCCGGAGGA
                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                     AL583041.1 GI:12951623
EST.
                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Prime, mRNA sequence
AL583041
                                                                                                                                                                                                                                                                                                                                                                                                                                                                201
                                                                                                            Conservative
                                                                                                                                                         http://fulllength.invitrogen.com"
280 c 283 g 173 t
                                                                                                                                                                                                                                                              /sex⇔"male"
                                                                                                                                                                                                                                                                 /clone_lib="LTI_NFL010_BC2"
                                                                                                                                                                                                                                                                            /organism="Homo sapiens"
/db_xref="taxon:9606"
/clone="CSODL009YJ18"
                                                                                                                   20.1%;
88.0%;
                                                                                                     Score 737.6; DB 9;
Pred. No. 3.7e-178;
1; Mismatches 110;
                                                                                                                                                                                                                                                                                                                                                                                                                                                              bp mRNA
                                                                                                                                                                                                                                                                                                                Web : www.genoscope.cns.fr.
                                                                                                                                                                                                                                                                                                                                                                                                                                                         RNA linear EST 16-FEB-2001
                                                                                                                                             2 others
                                                                                                     Indels
                                                                                                                     Length 939;
                                                                                                    2;
                                                               60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    780
   COMMENT
                                                                          KEYWORDS
SOURCE
                                                                                           VERSION
                                                                                                                                                                                          Qγ
                                                                                                                                                                           멍
                                                                                                                                                                                                             Ъ
                                                                                                                                                                                                                             Qγ
                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                              Qy
                                                                                                                                                                                                                                                                                  DЬ
                                                                                                                                                                                                                                                                                                Qy
                                                                                                                                                                                                                                                                                                                    Ъ
                                                                                                                                                                                                                                                                                                                                    Qγ
                                                                                                                                                                                                                                                                                                                                                      DЪ
                                                                                                                                                                                                                                                                                                                                                                      γQ
                                                                                                                                                                                                                                                                                                                                                                                        DЬ
                                                                                                                                                                                                                                                                                                                                                                                                      Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                           DЪ
                                                                                                                                                                                                                                                                                                                                                                                                                                          Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ър
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ъ
```

```
REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                              RESULT 5
BQ956845
LOCUS
                                                                                                                                                                   ACCESSION
                                                                                                                                                                                             DEFINITION
                                                                                                                ORGANISM
                                                                                                                                                                                                                                                                                                 2711
                                                                                                                                                                                                                                                                                                                2651 TCTTCATTAGCACACGGCTTGGCACAGAGGAGATCAGCCCCAGAGTGCTTCAATCCTTGG
                                                                                                                                                                                                                                                                                                                                                                   2591 CGGTGGCTAGTGAAATTTTCAAGGGCAAGAAGGACAACTACCCCCAGAGTGTCCCCAGAC
                                                                                                                                                                                                                                                                          899
                                                                                                                                                                                                                                                                                                                                                                                                                                                      2531
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2471 CACCGCCACCTGCCCTGAGAGAGGCCTCAGAACTGCTACGGGAACTGTGCATGAAGAACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2411 CATTITTGCTTAACCTGAGGCGGCAACTGCCCCGGAATGTTCTGGACACCTCCTGGCCCA 2470
                                                                                                                                                                                                                                                                                                                                                                                                                              719
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2351 TTTTGGGCCATTCACCCCGGGGGGCCCTGAGAATGCCTTCTTCTTGGACCACGTGCGCGCCT 2410
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2291
                     house mouse.

M Mus musculus
Eukaryota; Metazoa; Chordata; Crar
Mammalla; Eutheria; Rodentia; Sciu
1 (bases 1 to 932)
NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mar
Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            539 Tecrisoscencececececececes adancecerrerrerrecrissacear subsection 598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2171
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2051
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               239
                                                                                                                                                                                                                                                           GCTCTGAGCCCATTCAGTATGCGGTGCCTGTTGTKTAA
                                                                                                                                                                                                                                                                       GCTCTGAACCCATCCAGTATGCCGTGCCCCGTGGTAAAA 2748
                                                                                                                                                                                                                                                                                                     TCTTCATCAGCACTCGGCTTGGTACAGATGAGATCAGCCCCCGAGTGCTGCAGGCCTTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   121
Contact: Robert Strausberg, Ph. Email: cgapbs-r@mail.nih.gov
                                                                                                                                                                                                                                                                                                                                                      TGGTGTGGAAATACTGCCGGAGTATCAGCCCTGAGTGGAAGCAGCAGCTGCAGCAGCAGAAGG
                                                                                                                                                                                                                                                                                                                                                                                                                      TGGTGTGGAAGTACTGCCGGAGCATCAGCCCTGAGTGGAAGCAGCAGCAGCTGCAGCAAAAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTTTTTTGCTAAACCTGAGGCGGCAGCTGCCCCGGAATGTCCTGGACACCTCGTGGCCCA
                                                                                                                                                                B0956845

AGENCOURT 8800261 NCI_CGAP_C024

IMAGE: 6399165 5', mRNA sequence.
                                                                                                                                        EST
                                                                                                                                                 BQ956845.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGAAGGCAGCCAAGAGGAAGTGGGCAGCCCAGACCATCCGTCGACTCATCCGTGGCTTCA 2350
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGAAGGCAGCCAAGAGGAAGTGGGCGGCACAGACCATCCGGGGGGCTCATCCGAGGCTTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TCTTCATCCGATTCCCCAAGACCTTATTTGCCACAGAGGACTCCCCTGGAAGTCCGGCGGC 2170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CCGTGTTGGTCAGACACCTCGGCTACAAGCCAGAAGAGTACAAAATGGGCAGGACTAAGA 2110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TCTTCATCCGCTTCCCCAAGACCCTCTTTGCCACAGAGGATGCCCTGGAGGTCCGGCGGC 358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CTGTGCTGGTCCGACACCTGGGCTACAAGCCAGAAGAGTACAAGAWGGGCAGGACCAAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACAAGTCACTGTGCCCAGAGACGTGGCCCACGTGGGCAGGACGGCCGCA-GATGGGGTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACAAGTCACTGTGCCCAGAGACATGGCCCATGTGGGCAGGACGGCCCCAGGATGGTGTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGCGCGTGCGC-GAGCCGGCTTTGCCTATCGCCGCAAATACGAAGCTTTCCTGCAAAGGT
                                                                                                                                              GI:22372323
                                                            Chordata; Craniata; Vertebrata; Euteleostomi; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                Mammalian
                                                                                                                                                                          Mus musculus
                                                                                                                                                                                           mRNA
                            Gene Collection
                                                                                                                                                                                       linear
                                                                                                                                                                            CDNA
                                                                                                                                                            clone
                                                                                                                                                                                                                                                                                                                                                      838
                                                                                                                                                                                                                                                                                                                                                                                2650
                                                                                                                                                                                                                                                                                                                                                                                                                                                        718
                                                                                                                                                                                                                                                                                                                                                                                                                                 2590
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2530
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             658
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             179
```

.,

```
BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches 749;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           source
                                                                                                                                        551
                                                                                                                                                                             522
                                                                                                                                                                                                                     491
                                                                                                                                                                                                                                                            462
                                                                                                                                                                                                                                                                                                   431
                                                                                                                                                                                                                                                                                                                                          402
                                                                                                                                                                                                                                                                                                                                                                                  371
                                                                                                                                                                                                                                                                                                                                                                                                                         342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     42 CGGCCCTGGGCAGTGACCGGGGTTCGAGTGACCATGGAGAGCGCCCTTGACTGCCCGAGACC 101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGAATGCCAAGACTCTCCGCAACGATAACTCCAGCCGGTTTGGAAAGTACATGGATGTGC
                                                                                                                                                                                                                                       AACGGGGTGGCGAGTGCGAGACCGCCTGTTGCAGAGCAACCCCGTGTTAGAGGCCTTTG
                                                                                                                                                                                                                                                                                                                    GCAAGACAGAGGCCACCAAGAGACTGCTCCAGTTCTATGCAGAGACCTGCCCAGCCCCTG
                                                                                                                                                                                                                                                                                                                                                                                                  GGGCACTTCGTACTGAGCGTCGGGACCAGGCAGTGATGATTTTTTTGGAGAGAGTGGGGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGGTAGGGGTGCAGGACTTTGTCCTGCTGGAGAATTTCACCAGTGAGGCTGCCTTCATTG 161
CCCGGGTGCTGCACCAAATCACGGAGAGCGGAACTTCCACGTCTTTTACCAGCTACTGG
                                                                                                                                                                                                                                                                                               GCAAGACAGAGGCCACCAAGAGACTGCTCCAGTTCTATGCAGAGACCTGCCCAGCCCCTG
                                                                                                                                                                                                                                                                                                                                                                              GGGCACTTCGTACTGAGCGTCGGGACCAGGCAGTGATGATTTCTGGAGAGAGTGGGGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGGTAGGGGTGCAGGACTTTGTCCTGCTGGAGAATTTCACCAGTGAGGCTGCCTTCATTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CGGCCCTGGGCAGTGACGGGGTTCGAGTGACCATGGAGGGGCGCCTTGACTGCCCGAGACC 130
                                                       AGTTTGACTTNCAGGGTGCCCCCGTGGGAGGCCACATTCTCAGTTACCTCCTGGAAAAGT
                                                                                               AGTTTGACTTCAAGGGTGCCCCCGTGGGAGGCCACATTCTCAGTTACCTCCTGGAAAAGT 641
                                                                                                                                    GGAATGCCAAGACTCTCCGCAACGATAACTCCAGCCGGTTTGGAAAGTACATGGATGTGC
                                                                                                                                                                                                                  AACGGGGTGGCGCAGTGCGAGACCGCCTGTTGCAGAGCAACCCCGTGTTAGAGGCCTTTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AGAACCTCCGGCGGCGGTTCCGGGAGAACCTCATTTATACCTACATCGGTCCTGTCCTAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Plate: LLAM13899 row: m column: 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Tissue Procurement: The Cepko Laboratory
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         cDNA Library Preparation: Life Technologies, Inc. CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL) DNA Sequencing by: Agencourt Bioscience Corporation Clone distribution: MGC clone distribution information can be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        quality sequence stop:
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Cclone="IMAGE:6399165"

/clone_lib="NCI_CCAP_CO24"

/clone_lib="NCI_CCAP_CO24"

/lab_host="PH108 (T1 phage-resistant)"

/note="Organ: colon; Vector: pCMV-SPORT6; Site_1: Not1;

Site_2: Sall; Cloned unidirectionally. Primer: Oligo d'
Average insert size 1.6 kb. Constructed by Life
Technologies. Note: this is a NCI_CGAP Library."

a 263 c 276 g 188 t 1 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /strain="FVB/N"
/db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /organism="Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .932
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                19.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 723.4; DB 14
Pred. No. 1.6e-174;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               598.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 932;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Oligo dT.
                                                                                                                                                                                                                                                                                                                                      461
                                                       670
                                                                                                                                    610
                                                                                                                                                                           581
                                                                                                                                                                                                                     550
                                                                                                                                                                                                                                                                                               490
                                                                                                                                                                                                                                                                                                                                                                                430
                                                                                                                                                                                                                                                                                                                                                                                                                     401
                                                                                                                                                                                                                                                                                                                                                                                                                                                            370
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1;
```

ДЬ

Ş DЬ

В Ş Ş

р δõ

Q

망 δ В

Ş

702

AGGGGGGGGGAGGAGGACTCTCCGTCGGCTGGGCTTGGAACGGAACCCCCCAGAGCTACT

20

1327 TCTCAAGTCGGAGCAGGAGGAATACGAGGCTGAGGGCATCGCGTGGGAACCTGTCCAGTA 1386

Ş 밁 Ş Ъ

В

Ş

В δÃ g Ş

```
RESULT 6
BQ571422
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMMENT
                                                                                                                                                                                                                                                                                                                           ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                             BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DEFINITION
                                                                                                                                                                                               Query Match
Best Local Similarity
                                                                                                                                                         Matches 744;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE
                                             1268 GAGCAGTTCTGCATCAACTACTGCAATGA-GAAGCTGCAGCAGCTCTTCATCGAGCTGAC 1326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       791
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  762
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 731
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GAGCAGTTCTGCATCAACTACTGCAATGACGAAGCTGCAGCAGCTCTTCATCGAGCTGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TGTACCTGGTGAAGGGCCCATTGGTGCCAAGGGTCTCCTCCATCAACGAACAGA 844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TGTACCTGGTGAAGGGCCAGTGTG----CCAAGGTCTCCTCCATCAACGACAAGA 812
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Contact: Robert Strausberg, Ph.D.

Email: cgapbs-remail.nih.gov

Tissue Procurement: Dr. James Lin, Univeristy of Iowa
cDNA Library preparation: Dr. M. Bento Soares, University of Iowa
cDNA Library Arrayed by: Dr. M. Bento Soares, University of Iowa
cDNA Sequencing by: Dr. M. Bento Soares, University of Iowa
Clone Distribution: MGC clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BO571422 750 bp mRNA
UI-M-FCO-byb-f-O7-O-UI.I NIH_BMAP_FCO Mus
IMAGE.5715846 5', mRNA sequence.
BO571422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus 1 (bases 1 to 750)
NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BQ571422.1
EST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Seq primer:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               house mouse.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (BMAP)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  This clone was contributed by the Brain Molecular Anatomy Project
                                                                                                                                                                                                                                                                                                                                                             187
                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                gel. First strand cDNA synthesis was primed with an oligo-dT primer containing a Not I site. Double stranded cDNA was size selected according to mRNA size fraction, ligated with EcoR I adaptor, digested with Not I, and then cloned directionally into pYX-Asc vector. The library tag sequence located between the Not I site and the polyA tail, is TGAGAGAGC. This library was created for the University of Iowa Mouse Brain Molecular Anatomy Project (BMAP): 'Gene Discovery in the Developing Mouse Nervous System', supported by National Institutes of Mental Health (NIMH), Hemin Chin, Ph.D., program coordinator."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /Clone_lib="NIH_BMAP_FCO"
/Clone_lib="NIH_BMAP_FCO"
/Lissue_type="whole brain"
/dev_stage="embryo 12.5 dpc"
/lab_host="OHIOB (T1 phage resistant)"
/lab_host="OHIOB (T1 phage resistant)"
/note="Organ: brain; Vector: pYX-Asc; Site_1: EcoR I;
/note="Organ: brain; Vector: pYX-Asc; Site_1: EcoR I;
/note="Organ: brain; Vector: pYX-Asc; Site_1: EcoR I;
/note="Organ: brain; Vector: pXX-Asc; Site_1: EcoR I;
/note="Organ: brain; Vec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /strain="C57BL/6"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /clone="IMAGE:5715846"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /organism≃"Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   pyx-5
                                                                                                                                                                                               19.7%;
99.2%;
                                                                                                                                                             0
                                                                                                                                                                                               Score 720.2; DB Pred. No. 1e-173;
                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                14;
                                                                                                                                                             4
                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              musculus
                                                                                                                                                                                                                                    Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              cDNA clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EST 19-JUN-2002
                                                                                                                                                     2
                                                                                                                                                         Gaps
60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 7.90
```

```
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                             VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                   RESULT 7
BI665846
LOCUS
                                                                                                    COMMENT
                                                                                                                                                                                                                                                        DEFINITION
                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                             망
                                                                                                                                                                                                                                                                                                                                                                                                Q
                                                                                                                                                                                                                                                                                                                                                                                                                              Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                              δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            οy
                                                                                                                                                                                                                                  ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     дd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                              JOURNAL
                                                                                                                                                                                  ORGANISM
                                                                                                                                                                                                                                                                                                                                                        1986
                                                                                                                                                                                                                                                                                                                                                                                                       1926
                                                                                                                                                                                                                                                                                                                                                                                                                                                      1866
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1806
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1627
                                                                                                                                                                                                                                                                                                                               721
                                                                                                                                                                                                                                                                                                                                                                              661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1687
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1507
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1447
                                                                                                                                                                                                                                                                                                                                                                                                                               601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61
                                                                                                                                                                                                                                                                                                                                        GAGGTACAAGTCACTGTGCCCAGAGACATG 2015
                                                                                                                                                                                                                                                                                                                           GAGGTACACGTCACTGTGCCCAGAGACATG
                                                                                                                                                                                                                                                                                                                                                                      GAATCTCCCCCTGCCAAAGCTGGCTTTGCCTATCGTCGCANATATGAGGCTTTCCTGCA
                                                                                                                                                                                                                                                                                                                                                                                  GAATCTGCGCGTGCGCAGAGCTGGCTTTGCCTATCGTCGCAAATATGAGGCTTTTCCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                     CAAGAAGCGGCCAG-GACGGTGGCCACCCAGTTCAAGATGAGCCTCCTGCAGCTCGTGCA 1805
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CAGTGTGACTGGGTTTTCTGGATAAAAACAATGACCTCCTCTTTCCGGAACCTGAAGGAGAC 1686
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CAGGAAATCCCTAGACCGAGGGGAGTTCCGCCTTCTGCATTATGCTGGAGAGGTGACCTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CAAGAAGCGGCCAGAGACGGTGGCCACCCAGTTCAAGATGAGCCTCCTGCAGCTCGTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CAGTGTGACTGGGTTTCTGGATAAAAAACAATGACCTCCTCTTCCGGAACCTGAAGGAGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CAGGAAATCTCTAGACCGAGGGGAGTTCCGCCCTTCTGCATTATGCTGGAGAGGTGACCTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GGAGGACACTGTCAAGCCCCACCCTCACTTCCTGACGCACAAGCTCGCTGACCAGAAGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CTTGGATGAAGAGTGCCTGCGTCCTGGGGAGGCCACGGACCTGACCTTTCTGGAGAAGTT 1506
   Contact: Robert Strausberg, Ph.D.
Email: Ggapbs-r@mail.nih.gov
Tlssue Procurement: Jeffrey Green M.D.
CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can
found through the I.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CTTCAACAACAAGATCATCTGTGACCTGGTAGAGGAGAAGTTCAAGGGCATCATCTCCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTTCAACAAGATCATCTGTGACCTGGTAGAGGAGAAGTTCAAGGGCATCATCTCCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TCTCAAGTCGGAGCAGGAGGAATACGAGGCTGAGGCATCGCGTGGGAACCTGTCCAGTA
                                                                                                                                                                                                                   mRNA sequence.
BI665846
BI665846.1 GI
                                                                                                                Bukaryota; Metazoa; Chordata; Craniata; N
Mammalla; Eutherla; Rodentia; Sciurognati
1 (bases 1 to 760)
NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian
nttp://image.llnl.gov
                                                                                                            Unpublished (1999)
                                                                                                                                                                                 Mus musculus
                                                                                                                                                                                                                                                   BI665846
603289767F1 NCI_CGAP_Mam6
                                                                                                                                                                                             house mouse
                                                                                                                                                                                                                   GI:15580079
                                                                                                                                                                                                                                                760
Mus
                                                                                                                                                                                                                                                              dq
                                                                                                                                                                                                                                                                                                                           750
                                                                                                                                                   Craniata; Vertebrata; Sciurognathi; Muridae;
                                                                                                                                                                                                                                                  musculus
                                                                                                                                                                                                                                                                mRNA
                                                                                                                                                                                                                                                  cDNA clone
                                                                                                                   Gene
                                                                                                                                                                                                                                                             linear
                                                                                                                  Collection
                                                                                                                                                                                                                                                EST 12-SEP-2001
IMAGE:5323769 5',
                                                                                                                                                     Euteleostomi;
Murinae; Mus
                                                                                                                 (MGC)
                                                                                                                                                                                                                                                                                                                                                                                               1985
                    be
                                                                                                                                                                                                                                                                                                                                                                        720
                                                                                                                                                                                                                                                                                                                                                                                                                                              1925
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1626
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1566
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1.20
                                                                                                                                                     Mus
```

```
Qγ
                              В
                                                  Qy
                                                                             дδ
                                                                                                Qγ
                                                                                                                          В
                                                                                                                                              Qy
                                                                                                                                                                       Дβ
                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                    д
                                                                                                                                                                                                                                        Qy
                                                                                                                                                                                                                                                                   Дb
                                                                                                                                                                                                                                                                                        δÃ
                                                                                                                                                                                                                                                                                                                 Вр
                                                                                                                                                                                                                                                                                                                                     Qy
                                                                                                                                                                                                                                                                                                                                                               Вb
                                                                                                                                                                                                                                                                                                                                                                                    Qy
                                                                                                                                                                                                                                                                                                                                                                                                              Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                  Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                            DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity
Matches 752; Conserv
      2433
                                                                                                  2313
                                                                                                                                                 2253
                                                                                                                                                                                              2193
                                                                                                                                                                                                                                           2133
                                                                                                                                                                                                                                                                                          2073
                                                                                                                                                                                                                                                                                                                                       2013
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1833
                              661
                                                                             601
                                                                                                                          541
                                                                                                                                                                                                                                                                                                                                                                                       1953
                                                                                                                                                                                                                                                                                                                                                                                                                                     1893
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1773
                                                                                                                                                                       481
                                                                                                                                                                                                                    421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1714 GGCCCAGTGCTTTGACAAGAGTGAGCTCAGTGACAAGAAGCGGCCAG-GACGGTGGCCAC 1772
                                                                                                                                                                                                                                                                   361
                                                                                                                                                                                                                                                                                                                 301
                                                                                                                                                                                                                                                                                                                                                               241
                                                                                                                                                                                                                                                                                                                                                                                                              181
                                                                                                                                                                                                                                                                                                                                                                                                                                                            121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 GGCCCAGTGCTTTGACAAGAGTGAGCTCAGTGACAAGAAGCGGCCAGAGACGCTGGCCAC 60
GCAACTGCCCCGGAATGTTCTGGACACCTCCTGGCCCACACC
                                 CCCTGAGAATGCCTTCTTCTTGGACCACGTGCGGCCTCATTTTTGCTTAACCTGAGGCG
                                                                      GCAGCCCAGACCATCCGTCGACTCATCCGTGGCTTTAGCGCCCATTCACCCCGGTG
                                                                                GGCAGCCCAGACCATCCGTCGACTCATCCGTGGCTTCATTTTGCGCCCATTCACCCCGGTG
                                                                                                                   CTGTATCCAGTCATGGTGGCGTGGCACACTGGGCCGGAGGAAGGCAGCCAAGAGGAAGTG
                                                                                                                              CTGTATCCAGTCATGGTGGCGTGGCACACTGGGCCGGAGGAAGGCAGCCAAGAGGAAGTG
                                                                                                                                                              GGCGGCCTGGAGGGGCTTTCATTGGCGACAGAAATTTCTCCGGGTGAAGCGATCAGCCAT 2252
                                                                                                                                                                                                                                                          CTACAAGCCAGAAGAGTACAAAATGGGCAGGACTAAGATCTTCATCCGATTCCCGAAGAC
                                                                                                                                                                                                                                                                                                        CTTATTTGCCACAGAGGACTCCCTGGAAGTCCGGCGGCAGAGTCTAGCCACCAAGATCCA 2192
                                                                                                                                                                                                                                                                                                                                                                    TGCCTATCGTCGCAAATATGAGGCTTTCCTGCAGAGGTACAAGTCACTGTGCCCAGAGAC
                                                                                                                                                                                                                                                                                                                                                                                                     CCGACATCAGGTGAAGTACCTGGGACTGATGGAGAATCTGCGCGTGCGCAGAGCTGGCTT 1952
                                                                                                                                                                                                                                                                                                                                                                                                                                                                TATCCGGTGCATCAAGCCAAACGACGCCAAGCAGCAGCGGGTCGCTTTGATGAGGGTGCTCAT 1892
                                                                                                                                                                                                                                                                                                                                                        TGCCTATCGTCGCAAATATGAGGCTTTCCTGCAGAGGTACAAGTCACTGTGCCCAGAGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TATCCGGTGCATCAAGCCAAACGACGCCAAGCAGCCGGGTCGCTTTGATGAGGTGCTCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      High
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Plate:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  quality sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LLAM11821
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /clone_lib="NCI_CGAP_Mam6"
/sex="female, vligin"
/tissue_type="infiltrating of
/dev_stage="5 months"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /note="Organ: mammary; Vector: pCMV-SPORT6; Site_1: Saite_2: Not1; Cloned unidirectionally. Primer: Oligo (Library constructed by Life Technologies. Investigator providing samples: Jeffrey Green, M.D., NIH" a 217 c 224 g 150 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /strain="FVB/N"
/db_xref="taxon:10090"
/clone="IMAGE:5323769"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ∕organism="Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1. .760
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          19.5%;
98.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             row: e
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 714.8; DB 13;
Pred. No. 2.4e-172;
""sematches 7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   stop:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  column:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ductal carcinoma"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     760;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                             2432
                                                                    660
                                                                                           2372
                                                                                                                                          2312
                                                                                                                   600
                                                                                                                                                                                                              480
                                                                                                                                                                                                                                                           420
                                                                                                                                                                                                                                                                                  2132
                                                                                                                                                                                                                                                                                                                                 2072
                                                                                                                                                                                                                                                                                                                                                        300
                                                                                                                                                                                                                                                                                                                                                                               2012
                                                                                                                                                                                                                                                                                                                                                                                                                                                       180
                                                                                                                                                                                                                                                                                                         360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Salī;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              w
```

В

720

GCAACTG-CCCGGAATGTCCTGGACACCTCCTGGCCCACATC

```
δÃ
                                                                                            δõ
                                                                                                                                     В
                                                                                                                                                               200
                                                                                                                                                                                                     В
                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                        DЪ
                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOURCE
ORGANISM
 멍
                                                                   DЬ
                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BQ942930
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                   3126
                                                                                                     3066
                                                                                                                                                                      3006
                                                                                                                                                                                                                                        2946
                                                                                                                                                                                                                                                                                                          2886
                                                                                                                                                                                                                                                                                                                                                        2826 TAAAGTCAAGCAGAGAATTGATTATGCCAACCTAACCGGAATCTCTGTGAGTAGCCTGAG 2885
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         source
                                                                   241
                                                                                                                                      181
                                                                                                                                                                                                        121
   301
                                                                                                                                                                                                                                                                        61
                                                                                                                                                                                                                                                                                                                                           1
                                                                                                                                                                                                                                                                    FIGATAGCCTATTTGTGCTTCACGTGCAGCGTGAAGACAACAACAAGCAGAAGGGAGATGTGGT 2945
                                                                                                                                                     GCTGCAGAGTGATCATGTGATCGAGACACTAACCAAGACGGCCCTCAGTGCTGACCGCGT 3005
                                                                                     CATCATTGACTTCACATCGGGCTCAGAGCTTCTCTCATCACCAAGGCTAAGAATGGCCACCT
                                                                                                                                     TAAAGTCAAGCAGAGAATTGATTATGCCAACCTAACCGGAATCTCTGTCAGTAGCCTGAG
               GGCTGTGGTGGCCCCACGGCTGAATTCTCGGTGATGAAGGCTGCGGTGGACCGCTCCTGA 3185
GGCTGTGGTGGCCCCACGGCTGAATTCTCGGTGATGAAGGCTTCAGTGGACCCCCTCCTGA
                                                                   CATCATTGACTTCACATCGGGCTCAGAGCTTCTCATCACCAAGGCTAAGAATGGCCACCT
                                                                                                                                                                                                                                                                                                                                                                                                             al Similarity
745; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      cDNA Library Preparation: Life Technologies, Inc. cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL) DNA Sequencing by: Agencourt Bioscience Corporation Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov row: a column: 21 High quality sequence stop: 617.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BQ942930 935 bp
AGENCOURT_8815329 NCI_CGAP_Co24
IMAGE:6398108 5', mRNA sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Email: cgapbs-r@mail.nih.gov
Tissue Procurement: The Cepko Laboratory
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BQ942930
BQ942930.1 GI:22358408
EST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Contact: Robert Strausberg, Ph.D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                house mouse.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (bases 1 to 935)
                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      quality sequence stop: Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /db_xref="taxon:10090"
/clone="IMAGE:6398108"
/clone="ib="NCI_CGAP_CO24"
/clone=lib="NCI_CGAP_CO24"
/lab_host="DB10B (T1 phage-resistant)"
/note="Organ: colon; Vector: pCMV-SPORT6; Site_1: NotI;
/site_2: SalI; Cloned unidirectionally. Primer: Oligo dT
Site_2: SalI; Cloned unidirectionally primer: Oligo dT
Average insert size 1.6 kb. Constructed by Life
Technologies. Note: this is a NCI_CGAP Library."
a 271 c 245 g 197 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /organism="Mus musculus"
/strain="FVB/N"
                                                                                                                                                                                                                                                                                                                                                                                                                           19.5%;
97.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 mRNA sequence
                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                           Score 714; DB 14;
Pred. No. 4.3e-172;
                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       musculus
                                                                                                                                                                                                                                                                                                                                                                                                             15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gene
                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 935;
                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EST
                                                                                                                                                                                                                                                                                                                                                                                                           ?
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       21-AUG-2002
                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                   3125
                                                                                                                                                                     3065
360
                                                                   300
                                                                                                                                     240
                                                                                                                                                                                                                                                                                                                                          60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                dT.
                                                                                                                                                                                                                                                                                                                                                                                                           2;
```

```
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 9
BI559061
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       γΩ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δÃ
                                                                                                                                                                                                                                                                       FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3545
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3246
                                                                                                                                                                                                                                                   source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CAATAGAAAAGCAGAGGCCTGAGCAGGCCAGGCCAGCCCTCTGCTGATGCCAAATATCTA 3425
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GAACAGGGCAAGGAATGTAACTGAAAGACTGACTGGGCTGGG 3586
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TTTTTTAAGAAAGCCATTTTCCTACCCTAAACACACT-GGATGTGTTTTTCCCTGCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CCTCTTGAGGTGATCAGGAGCCAGGGGAGCTACCCCATGAGTGGGCCAGGCCAGGCCACAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GAACAGGGCAAAGAATGTAACTGAAAGACTGACTGGGCTTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AGAGAAGGGAATTTTAACTGAGGTTTTCTCTGAGATTTTTTTGATGCTTTATAGGAAACTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGACAAGGGAATTTTAACTGAGGTTTTTCTCTGAGATTTTTTTGATGCTTTATAGGAAACTA 3485
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CCTCTCGAGGTGATCAGGAGCCAGGGAGCTACCCCATGAGTGGGCCCAGGCCGGGCCACAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TTTTTTTAAGAAAGGCATTTTCCTACCCTAAACACACTGGGATGTTTTTCCCCTGCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus 1 (bases 1 to 817)
NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
Email: Cgapbs-r@mail.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BI559061 817 bp mRNA linear EST 05-SEP-2001 603241534F1 NCI_CGAP_Mam4 Mus musculus cDNA clone IMAGE:5294168 5',
                                                                                                                                                                                                                                                               http://image.llnl.gov
Plate: LLAM11744 row: d column:
High quality sequence stop: 748.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                       Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Lothar Hennighausen Ph.D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mus musculus
                                                                                                                                                                                                                                                                                                                                            found through the I.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         house mouse.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BI559061.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 mRNA sequence
                                                                                                                                                                                                                                                                                                                                                            cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL) DNA Sequencing by: Incyte Genomics, Inc. Clone distribution: MGC clone distribution information can
                                                                                                                                                                                                                                                                                                                                                                                                                       cDNA Library Preparation: Life Technologies,
/note="Organ: mammary; Vector: pCMV-SPORT6; Site_1: Sall Site_2: NotI; Cloned unidirectionally. Primer: Oligo dy Library constructed by Life Technologies. Investigators providing samples: Lothar Hennighausen/Priscilla Furth, NIH Reference for transgenic model: Li et al., Cell Grov
                                                                                                                                                                                                           1. .817
/organism="Mus musculus"
/strain="NMRI"
                                                                                               /tissue_type="tumor, gross tissue"
/dev_stage="5 months"
/lab_host="DH10B"
                                                                                                                                                      /clone_lib="NCI_CGAP_Mam4"
                                                                                                                                                                          /db_xref="taxon:10090"
/clone="IMAGE:5294168"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GI:15446375
                                                                                                                                                                                                                                                                                                           9
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Priscilla Furth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3544
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        659
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            539
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 420
                                                                                                                                                                                                                                                                                                                                                                be
                                                           dT.
```

```
ACCESSION
VERSION
KEYWORDS
                                                         RESULT 10
BI653422
                                       LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local S
Matches 779
                                                                                        2384
                                                                                                                                                                                                                                      2268
                                                                                                                                                                                                                                                                                                                      661
                                                                                                                                                                                                                    601
                                                                                                                                                                                                                                                         541
                                                                                                                                                                                                                                                                                               481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1908
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1788
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1729
                                                                                                                                                                                                                                                                                                                                                                          361
                                                                                                                                                                                                                                                                                                                                                                                                              301
                                                                                                                                                                                                                                                                                                                                                                                                                                                     24 L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mc
Local C
779;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61
B1653422 76
I 603301166F1 NCI_CGAP_Mam3 M
mRNA sequence.
B1653422
B1653422 B1653422.1 GI:15567658
EST.
                                                                                                                                      CCTTCTTCTTGGACCACCTGCGCGCCTCATTTTTGCTTAACCTGAGGCGGCAACTGCCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             70 CGGAACCTGAAGGAGACCATGTGCAGCTCAATGAACCCCA-TCATGGCCCAGTGCTTTGA 1728
                                                                                                                          CTTCCTTCTTGGACCACGTGCGCGCCTACATGATGCTTAACCTGAGGCGGAAATTGCCCG
                                                                                                                                                                ATCCGTCGACTCATCCGTGGCTTCATTATGCGCCATTCACCCCGGTGCCCTGAAGAATGC
                                                                                                                                                                           ATCCGTCGACTCATCCCTGGCTTCATTTTGCGCCATTCACCCCGGTGCCCTGA--GAATG
                                                                                                                                                                                                      GTGGCGTGGCACACTGGGCCGGAGGAAGGCAGCCAAAGAGGAACGTGGGCAGACCAGAAC
                                                                                                                                                                                                                  GTGGCGTGGCACACTGGGCCGGAGGAAGGCAGCCAA--GAGGAAGTGGGCAGCCCAGACC
                                                                                                                                                                                                                                                         CTTTCATTGGCGACAGAAATTTCTCCGGGTGAAGCGATCAGCCATCTGTATCCAGTCATG
                                                                                                                                                                                                                                                                                  CTTTCATTGGCCACAGAAATTTCTCCGGGTGAAGCGATCAGCCATCTGTATCCAGTCATG
                                                                                                                                                                                                                                                                                                                                                             AGGACGCCCCAGGATGGTGGGCCGTGTTGGTCAGACACCTCGGCTACAAGCCAGAAGA
                                                                                                                                                                                                                                                                                                                                                                       AGGACGCCCCAGGATGGTGGCCGTGTTGGTCAGACACCTCGGCTACAAGCCAGAAGA 2087
                                                                                                                                                                                                                                                                                                                                                                                                  ATATGAGGCTTTCCTGCAGAGGTACAAGTCACTGTGCCCAGAGACATGGCCCATGTGGGC
                                                                                                                                                                                                                                                                                                                                                                                                            ATATGAGGCTTTCCTGCAGAGGTACAAGTCACTGTGCCCAGAGACATGGCCCATGTGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                      GTACCTGGGACTGATGGAGAATCTGCGCGTGCGCAGAGCTGGCTTTGCCTATCGTCGCAA 1967
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GCCAAACGACGCCAAGCAGCCGGGTCGCTTTGATGAGGTGCTCATCCGACATCAGGTGAA 1907
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CAAGAGTGAGCTCAGTGACAAGAAGCGGCCAG-GACGGTGGCCACCCAGTTCAAGATGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GCCAAACGACGCCAAGCAGCCGGGTCGCTTTGATGAGGTGCTCATCCGACATCAGGTGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CAAGAGTGAGCTGACAAGAAGCGGCCAGAGACGGTGGCCACCCAGTTCAAGATGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   19.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Differentiation 226 c 238 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 713.8;
Pred. No. 4.
                                           763 bp
                                  Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                 Musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      7, 3-11 (1996)."
157 t
                                          mRNA
                                                                                          817
                                                                                                            2480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8; DB 13;
4.5e-172;
hes 32;
                                 CDNA
                             linear
A clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length
                           EST 12-SEP-2001
IMAGE:5341408 5',
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        817;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9
                                                                                                                                                                                                                          2325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                        660
                                                                                                                                                                                                                                                                                                     2207
                                                                                                                                                                                                                                                                                                                                                              420
                                                                                                                                                                                                                                                                                  540
                                                                                                                                                                                                                                                                                                                                                                                                   360
                                                                                                                                                                                                                                                                                                                                                                                                                       2027
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4
    QΥ
                       Ъ
                                         Qy
                                                             Ъ
                                                                               οy
                                                                                                    DЬ
                                                                                                                     20
                                                                                                                                         В
                                                                                                                                                            Qy
                                                                                                                                                                                Db
                                                                                                                                                                                                 Qγ
                                                                                                                                                                                                                      DЪ
                                                                                                                                                                                                                                        Ωy
                                                                                                                                                                                                                                                           Ъ
                                                                                                                                                                                                                                                                                                                                      BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMMENT
                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                         Query Match
Best Local
                                                                               1351
                                                                                                                      1291
                                                                                                                                                                                                  1171
                                                             321
                                                                                                                                                                                                                                        1111
                                                                                                                                         201
                                                                                                                                                                               141
                                                                                                                                                                                                                      81
                                                                                                                                                                                                                                                                                              730;
                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          house mouse.
Mus musculus
                                                                                                                                                                                                                                                                                                                                              188
                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                              ۵
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /organism="Mus
                                                                                                                                                                                                                                                                                                   19.5%;
98.3%;
                                                                                                                                                                                                                                                                                             0;
```

Ŷ B δ Ъ δ В δÃ В Š В Š 밁 Ş д Š da QY Вb ş В δÃ ₽ Š 밁 Ş В δÔ

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1051 GGGGAAGAGCTCCTGAGCCCACTGAACCTTGAACAGGCGCCATATGCCAAGGGATGCGCT 1110
CCTGGTAGAGGAGAAGTTCAAGGGCATCATCTCCATCTTGGATGAAGAGTGCCTGCGTCC 1470
                                                                                                                                             CCTGGTAGAGGAGAAGTTCAAGGGCATCATCTCCATCTTGGATGAAGAGTGCCTGCGTCC
                                                                                                                                                                                                                                                                                                    CATTTACGGCTTTGAAGTGTTTCAGCATAACAGCTTCGAGCAGTTCTGCATCAACTACTG
                                                                                                                                                                                                                                                                                                                            CATTTACGGCTTTGAAGTGTTTCAGCATAACAGCTTCGAGCAGTTCTGCATCAACTACTG
                                                                                                                                                                                                                                                                                                                                                                                                GGCCTCTAAGGACGCTGAGAGCCCCAGCTGGCGAAGCACCACGGTTCTTGGGCTCCTGGA 1230
                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGCCTCTAAGGACGCTGAGAGCCCCAGCTGGCGAAGCACCAGGGTTCTTGGGCTCCTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GGGGGAAGAGCTCCTGAGCCCACTGAACCTTGAACAGGCGGCATATGCAAGGGATGCGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Contact: Robert Strausberg, Ph.D.

Email: cgapbs-r@mail.nih.gov

Tissue Procurement: Lothar Hennighausen Ph.D., Chu-Xia Deng
cDNA Library Preparation: Life Technologies, Inc.
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information car
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
Plate: LLAM111867 row: d column: 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota; Metazoa; Chordata; Crar
Mammalia; Eutheria; Rodentia; Sciu
1 (bases 1 to 763)
NIH-MGC http://mgc.nci.nih.gov/
National Institutes of Health, Man
Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /note="Organ: mammary; Vector: pCMV-SPORT6; Site_1: Sal1; Site_2: NotI; Cloned unidirectionally. Primer: Oligo dT. Library constructed by Life Technologies. Investigators providing samples: Lothar Hennighausen/Chu-Xia Deng, NIH Reference for transgenic model: Xu et al., Nature Genetics 2, 37-43 (1999). 157 t 1 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /clone_11b="NCI_CGAP_Mam3"
/tissue_type="tumor, gross tissue"
/dev_stage="10 months"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /oryanism="Mus musculus"
/strain="129,C57BL/6J,FVB/N"
/db_xxef="taxon:1000"
/clone="IMAGE:5341408"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 712.4; DB 13; Pred. No. 1e-171;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Craniata; Vertebrata; Euteleostomi;
Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mammalian Gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1;
                                    1530
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                          440
                                                                                                                                                                                                                                                                                                                                            1290
                                                                                                                                                                                                                                                                                                      260
                                                                                                                                                                                                                                                                                                                                                                                200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ρħ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            .D
```

1.

669

609

93

```
BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 11
BI156248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LOCUS
                 Query Match
Best Local Sin
Matches 733;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1531
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1711
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1651
                                                                                                                                                                                                                                                                                                     source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1591
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         621
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               561
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            741
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TCACTTCCTGACGCACAAGCTCGCTGACCAGAAGACCAGGAAATCCCTAGACCGAGGGGA 1590
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CATGGCCCAGTGCTTTGACAAGAGTGAGCTCAGTGACAAGAAGCGGCCAGGACGGT-GGC 1769
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GTTCCGCCTTCTGCATTATGCTGGAGAGGTGACCTACAGTGTGACTGGGTTTTCTGGATAA 1650
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CACCCAGTTCACGATGAGCCTCC 763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CACCCAGTTCAAGATGAGCCTCC 1792
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CATGGCCCAGTGCTTNGACAAGAGTGAGCTCAGTGACAGAAGCGGCCAGAGACGGTGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                            Email: cgapbs-remail.nih.gov
Tissue Procurement: Lothar Hennighausen Ph.D., Chu-xia Dencebrary Preparation: Life Technologies, Inc.
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BI156248
602903422F1 NCI_CGAP_Mam3
                                                                                                                                                                                                                                                                                                                                                                    DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mammalia; Eutheria; Rodentia; S
1 (bases 1 to 769)
NIH-MGC http://mgc.nci.nih.gov/
National Institutes of Health,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              mRNA sequence.
BI156248
                                                                                                                                                                                                                                                                                                                                                        Plate: LLAM11092 row: k column: 06
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Contact: Robert Strausberg, Ph.D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BI156248.1
                                Similarity
                                                                                        183
                                                                                                                                                                                                                                                                                                               quality sequence start: 10 quality sequence stop: 764.
Location/Qualifiers
                                                                                               /note="Organ: mammary; Vector: pCMV-SPORT6; Site_1: Sall; Site_2: Not1; Cloned unidirectionally. Primer: Oligo dT. Library constructed by Life Technologies. Investigators providing samples: Lothar Hennighausen/Chu-Xia Deng, NIH Reference for transgenic model: Xu et al., Nature Genetics 22, 37-43 (1999)."
                                                                                                                                                                                                                                            /strain="129,C57BL/6J,FVB/N"
/db_xref="taxon:10090"
/clone="IMAGE:5033213"
                                                                                                                                                                                      /clone_11b="NCI_CGAP_Mam3"
/tissue_type="tumor, gross tissue"
/dev_stage="10 months"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                      ∕organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GI:14616249
                                                                                      37-43
201 c
                              19.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Chordata;
Rodentia;
                   0;
                 Score 709.8; DB 13
Pred. No. 4.7e-171;
0; Mismatches 2;
                                                                                      226
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      769 bp
                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          musculus cDNA clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mammalian
                                                                                      159
                                                                                      ÷
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       mRNA
                                          13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       linear
                                            Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Collection
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EST 05-JUL-
IMAGE:5033213
                                             769;
                 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Deng
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       05-JUL-2001
:5033213 5',
                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                   be
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mus
                2
                                                                                                                                                                                                                                            RESULT 12
BF538167
LOCUS
                                                                                                                                                          KEYWORDS
SOURCE
                                                                                      REFERENCE
AUTHORS
                                                                                                                                                                                      ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                               20
                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DЪ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ρy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Д
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            рь
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Q
                                          COMMENT
                                                                                                                                                                                                                               DEFINITION
                                                                                                                                                                                                                                                                                                                  Вþ
                                                                                                                                                                                                                                                                                                                                          QΥ
                                                                      TITLE
                                                                                                                                           ORGANISM
                                                          JOURNAL
                                                                                                                                                                                                                                                                                                                                             1269
                                                                                                                                                                                                                                                                                                                                                                                                                                                         1149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1030
                                                                                                                                                                                                                                                                                                                                                                                                                               634
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     574
                                                                                                                                                                                                                                                                                                                  753
                                                                                                                                                                                                                                                                                                                                                                         694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   454
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               970
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           394
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    910
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 334
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            850
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        274
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  790
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              214
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         730
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                670
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       610
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTCCAGCCGGTTTGGAAAGTACATGGATGTGCAGTTTGACTTCAAGGGTGCCCCCGTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GGTCTCCTCCATCAACGACAAGAGTGACTGGAAGGTTATGAGGAAGGCGCTGTCCGTCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GCTGGGCTTGGAACGGAACCCCCAGAGCTACTTGTACCTGGTGAAGGGCCAGTGTGCCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AGGCCACATTCTCAGTTACCTCCTGGAAAAGTCCCGGGTGGTGCACCAAAATCACGGAGA
                                                                                                                                                                                                                                                                                                                                AGCAGTTCTGCATCAAC 1285
                                                                                                                                                                                                                                                                                                                                                                      GGCATATGCAAGGGATGCGCTTGCCAAGGCTGTGTACAGCCGGACA-TTCACCTGGCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCACAGGAAGATCATCGCCAAGGGGGAAGAGCTCCTGAGCCCACTGAACCTTGAACAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GCTCAAATATCTGACCAGGCTCCTTGGTGTGGAAGGTACAACACTTAGGGAAGCCCTGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GGGCAACATCCACTTTGCTGCTGACGAGGACAGCAATGCCCAGGTTACTACTGAGAACCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGGCAACATCCACTTTGCTGCTGACGAGGACAGCAATGCCCAGGTTACTACTGAGAACCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TCAGAAAGATCAATAGGTCACTGGCCTCTAAGGACGCTGAGAGCCCCCAGCTGGCGAAGCA 1208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CCACAGGAAGATCATCGCCAAGGGGGAAGAGCTCCTGAGCCCACTGAACCTTGAACAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GCTCAAATATCTGACCAGGCTCCTTGGTGTGGAAGGTACAACACTTAGGGAAGCCCTGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGGCCACATTCTCAGTTACCTCCTGGAAAAGTCCCGGGTGGTGCACCAAAATCACGGAGA
                                                                                                                                                                                    mRNA sequence.
BF538167
BF538167.1 GI
Contact: Robert Strausberg, Ph.D.
Email: cgapbs r@mail.nih.gov
Tissue Procurement: Jeffrey E. Green, M.D.
cDNA Library Preparation: Life Technologies,
                                                                                               Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; (bases 1 to 861)
                                                                                                                                                                                                                             BF538167
602053638F1 NCI_CGAP_SG2
                                                                   NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian
                                                                                                                                           Mus musculus
                                                         Unpublished (1999)
                                                                                                                                                           house mouse
                                                                                                                                                                                                                               861
Mus
                                                                                                                                                                                                                             musculus
                                                                                                                                                                                                                                             mRNA
                                                                                                                                                                                                                             NA linear EST 11-DEC-2000 cDNA clone IMAGE:4193024 5',
                                                                       Gene
                                                                                                                 Muridae;
                                                                       Collection
                                                                                                                                                                                                                                                                                                               vì
                                                                                                                              Euteleostomi;
                                                                                                                 Murinae;
```

1089

573

693

Mus

633

1029

453

513

969

393 909 849 273 789 213 729 153

333

```
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                            2772
                                                                                                                                                                                                                                                                                       2712
                                                                                                                                                                                                                                                                                                                                                                                                2652
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2592
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2474
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2534
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2416
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2176 CTAGCCACCAAGATCCAGGCGGCCTGGAGGGGGCTTTCATTGGCGACAGAAATTTCTCCGG
                                                                                                                         611
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2296
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2236
                                                                                                                                                                                                                                  551
                                                                                                                                                                                                                                                                                                                                          491
                                                                                                                                                                                                                                                                                                                                                                                                                                                   431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              371
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local
                         CAAGCAGAGAATTGATTATGCCAACCTAACCGGAATCTCTGTGAGTAGCCTGAGTGATAG
                                                                                                     CAAGCAGAGAATTGATTATGCCAA-CTAACCGGAATCTCTGTCAGTAGCCTGAGTGATAG
                                                                                                                                                                                                              CTCTGAACCCATCCAGTATGCCGTGCCCGTGGTAAAATACGACCGTAAGGGTTACAAGCC
                                                                                                                                                                                                                                          CTCTGAACCCATCCAGTATGCCGTGCCCGTGGTAAAATACGACCGTAAGGGTTACAAGCC
                                                                                                                                                                                                                                                                                                                      GGTGGCTAGTGAAATTTTCAAGGGCAAGAAGGACCAACTACCCCCAGAGTGTCCCCAGACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TGTGGAAGTA-CTGCCGGAGCATCAGCCCTGAG-TGGAAGCAGCAGCAGCAGCAGCAAAAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                  GGTGGCTAGTGAAATTTTCAAGGGCAAGAAGGACAACTACCCCCAGAGTGTCCCCCAGACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TGTGGAAGTACCTGCCGGAGCATCAGCCCTGAGCTGGAAGCAGCAGCTGCAGCAAAAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TTGCTTAACCTGAGGCGGCGAACTGCCCCGGAATGTTCTGGACACCTCCTGGCCCGACAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TTGCTTAACCTGAGGCGGC-AACTGCCCCGGAATGTTCTGGACACCTCCTGGCCC-ACAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GTGAAGCGATCAGCCATCTGTATCCAGTCATGGTGGCGTGGCACACTGGGCCGGAGGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            804;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           н1gh
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL) DNA Sequencing by: Incyte Genomics, Inc.

Clone distribution: MGC clone distribution information can found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov plate: LLAM9524 row: k column: 09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            quality sequence stop: 'Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Cclone="IMAGE:4193024"
Cclone="NCI_CGAD_25C"
/Clone="NCI_CGAD_25C"
/Lab_host="NcII_CGAD_25C"
/Lab_host="NoIIOB (TI phage-resistant)"
/Lab_host="Oblide (TI phage-resistant)"
/Lab_host="Oblide (TI phage-resistant)"
/Lab_host="Oblide (TI phage-resistant)"
/Lab_host="NoII"
/Lab_hos
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /organism="Mus musculus"
/strain="FVB/N"
/db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              .861
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  19.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 709; DB 12;
Pred. No. 7.9e-171;
0; Mismatches 30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 861;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              pCMV-SPORT6; Site_1:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                 610
                                                                                                        670
                                                                                                                                                                                                                                                                   2771
                                                                                                                                                                                                                                                                                                                         550
                                                                                                                                                                                                                                                                                                                                                                            2711
                                                                                                                                                                                                                                                                                                                                                                                                                                  490
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2651
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2591
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             430
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2533
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2473
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2415
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   370
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Oligo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   7;
```

B 8

δ Q

Ş В Š g ρ Вb Š Вр ρ 밁 δ Дb Š Дb Ş В Š ք õ

밁

```
δã
             Дb
                                                                         DЬ
                                                                                                  δÃ
                                                                                                                                       DЬ
                                                                                                                                                                  Qy
                                                                                                                                                                                                     В
                                                                                                                                                                                                                              QΥ
                                                                                                                                                                                                                                                                                                                                  ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                               BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 13
AL546537
                                                                                                                                                                                                                                                               Query Match
Best Local S
Matches 769
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             QУ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORGANISM
                                         222
                                                                         184
                                                                                                                                       124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   source
                                                                                                     162
                                                                                                                                                                     102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3012
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2892
                                                                                                                                                                                                     64
                                                                                                                                                                                                                                   42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      850
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  790
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               730
TCTCTGTGTCAATCCCTACCGAGACCCTACAGATCTACAGCCGGCAGCATATGGAACGCTACC
                                                                                                                                                                                                           CGGCCCTGGGCAGTGACGGGGTTCGAGTGACCATGGAGAGGGCCTTGACTGCCCGAGACC 101
                                                             AGAACCTGCGGCGGCGATTTCGGGAGAATCTCATCTACACCTACATTGGCCCCGTCCTGG
                                                                                AGAACCTCCGGCGGCGGTTCCGGGAGAACCTCATTTATACCTACATCGGTCCTGTCCTAG
                                                                                                                             GGGTGGGGGTGCAGGATTTTCGTGCTGCTGGAGAACTTCACCAGCGAGGCCGCCTTCATCG
                                                                                                                                               GGGTAGGGGTGCAGGACTTTGTCCTGCTGGAGAATTTCACCAGTGAGGCTGCCTTCATTG
                                                                                                                                                                                            CGGCCCTGGGCAGTGACGGGGTTCGGGGTGACCATGGAGAGTGCGCTCACCGCCGTGACC
                                                                                                                                                                                                                                                                  769;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Η
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AGTGATCCTGTGGTCGGAAACTTAACCAAAAGGCCTCTATTGTTGCCCGGGTGAACAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCTATTTGTGCTTCACGTGCAGCGTGAAGACAACAAGCAGAAGGGAGGATGTGGTGCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GAGTGATCATGTGATCGAGACACTAACCAAGACGGCCTCAGTGCTGACCGCGTGAACAA 3011
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CTAATTTGTGCTTCACGTGCAGCGTGAAGACAACAAGCCGAAGGAGCTTGTGTGGGTTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Genoscope - Centre National de Sequencage
BP 191 91006 EVRY cedex - France
Email: segref@genoscope.cns.fr, Web : www
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Li,W.B., Gruber,C., Jessee,
Full-length cDNA libraries
Unpublished (2001)
                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Contact: Genoscope
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mammalia; Eutheria;
1 (bases 1 to 930)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Mammalia; Eutheria; Primates; Catarrhini; Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3012
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AL546537.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         prime, mRNA sequence.
AL546537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AL546537 LTI_NFL006_PL2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AL546537
                                                                                                                                                                                                                                                                                                                                               185
                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                //tissue_type="placenta"
//tissue_type="placenta"
//note="Vector: pCMVSPORT 6; Site_1: NotI; 1st strand cDNA
//note="Vector: pCMVSPORT 6; Site_1: NotI; 1st strand cDNA
was primed with a NotI-oligo(dT) primer. Five prime end
enriched, double-stranded cDNA was digested with Not I and
cloned into the Not I and Eco RV sites of the pCMVSPORT 6
vector. Library was normalized. Library was constructed by
Life Technologies. Contact: Feng Liang Life Technologies,
a division of Invitrogen 9800 Medical Center Drive
Rockville, Maryland 20850, USA Fax : (1) 301 610 8371
http://fulllength.invitrogen.com"
278 c 298 g 167 t 2 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /clone="CS0DI030YD16"
/clone_lib="LTI_NFL006_PL2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualifiers
                                                                                                                                                                                                                                                                              19.1%;
                                                                                                                                                                                                                                                          Score 700.4;
Pred. No. 1.3e
1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Jessee,J. and Polayes,D. braries and normalization
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   930
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     sapiens cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    qd
                                                                                                                                                                                                                                                          4; DB 9;
1.3e-168;
hes 97;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         www.genoscope.cns.fr.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  clone CS0DI030YD16
                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                        Length 930;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 linear
                                                                                                                                                                                                                                                          1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EST 16-FEB-2001
DI030YD16 5
                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                           161
                                                                                                                                                                                            123
   303
                              281
                                                               243
                                                                                                                              183
                                                                                               221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2951
```

```
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 14
BM450184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                           SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                     KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Locus
                                                                                                                                                                                                                         COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                  ERSION
                                                                                                                                                                                                                                                JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              903
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         882
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     843
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              822
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          783
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 762
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            723
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       702
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              642
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     582
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 544
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGGCACTTCGTACTGAGCGTCGGGACCAGGCAGTGATGATTTTTCTGCAGAGAGTGGGGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AGGGGGCGAGGAGGAGACTCTCCGTCGGCTGGGCTTGGAACGGAACCCCCAGAGCTACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TCAGCATCGTGGCCAGCGTCCTACATCT 909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AGGTTATGAGGAAGGCGCTGTCCGTCATTGACTTCACTGAGGATGAAGTGGAGGACTTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AACGGGGTGGCGCAGTGCGAGACCGCCTGTTGCAGAGCCAACCCCGTGTTAGAGGGCCTTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GCAAGACAGAGGCCACCAAGAGACTGCTCCAGTTCTATGCAGAGACCTGCCCAGCCCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TGAGCATCKTGGCCAGCGTCCTTCATTT 930
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAGTCGTYAGGAAGGCTCTGACAGTCATTGATTTCACCGAGGATGAAGTGGAGGACCTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AGTTTGACTTCAAGGGTGCCCCCGTGGGAGGCCACATTCTCAGTTACCTCCTGGAAAAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGCGCGGAGGTGCCGTGCGGGACCGGCTGCTACAGAGCAACCCGGTGCTGGAGGCCTTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GCAAGACCGAGGCCACCAAGAGGCTGCTGCAGTTCTATGCAGAGACCTGCCCAGCCCCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                           1031 bp
AGENCOURT_6393520 NIH_MGC_72 Homo
5', mRNA sequence.
BM450184
                Contact: Robert Strausberg, Ph.D.
Email: cgapbs r@mail.nih.gov
Tissue Procurement: ATCC/DCTD/DTP
CDNA Library Preparation: Life Technologies, Inc.
cDNA Library Arrayed by: The I.M.A.G.E. Consortium
Clone distribution: MGC clone distribution information
Cone distri
                                                                                                                                                                                                                                    NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian
Unpublished (1999)
                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Mammalia; Eutheria; Primates; Catarrhini; Hominidae. 1 (bases 1 to 1031)
                                                                                                                                                                                                                                                                                                                                                                                                human.
                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                       BM450184.1 GI:18499224
EST.
quality
sequence stop:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  mRNA
                                                                                                                                                                                                                                                                Gene
                                                                                                                                                                                                                                                                                                                                  Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                linear
                                                                                                                                                                                                                                                              Collection
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            clone
                                                                                                                                                                                                                                                                                                                                                    Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EST 05-FEB-2002
MAGE:5528227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              821
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 641
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        581
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   902
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       842
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          701
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            782
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     761
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 722
                                                                                    þ
```

```
BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Qy
                       Ş
                                                                    밁
                                                                                                           δõ
                                                                                                                                                          Вþ
                                                                                                                                                                                                  Qy
                                                                                                                                                                                                                                                    DЬ
                                                                                                                                                                                                                                                                                           QΥ
                                                                                                                                                                                                                                                                                                                                          멍
                                                                                                                                                                                                                                                                                                                                                                                  Q
                                                                                                                                                                                                                                                                                                                                                                                                                                    B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Вр
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Вр
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ouery Match
Best Local Similarity
Matches 801; Conser
                         2184
                                                                                                                                                                                                                                                                                                                                                                                       1944
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1705
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1405
                                                                                                              2124
                                                                                                                                                                                                       2064
                                                                                                                                                                                                                                                                                              2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1824
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1884
                                                                                                                                                          661
                                                                                                                                                                                                                                                    601
                                                                                                                                                                                                                                                                                                                                          541
                                                                                                                                                                                                                                                                                                                                                                                                                                    481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121
                                                                    721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   _
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CCACCCTCACTTCCTGACGCACAAGCTCGCTGACCAGAAGACCAGGAAATCCCTAGACCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CAAGATCCAGGCGGCCTGGAGGGGCTTTCA-TTGGCGACAGAAATTTCTCCGGGTGAAGC
                                                                                                                                                                                                                                                                                                                                                                                                                               GGTGCTCATCCGACATCAGGTGAAGTACCTGGGACTGATGGAGAAATCTGCGCGTGCGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CCCCATCATGGCCCAGTGCTTTGACAAGAGTGAGCTCAGTGACAAGAAGCGGCCAG-GAC 1763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGATAAAAACAATGACCTCCTCTTCCGGAACCTGAAGGAGACCATGTGCAGCTCAATGAA
                                                                                         CCCCAAGACCTTATTTGCCACAGAGGACTCCCTGGAAGTCCGGCGGCAGAGTCTAGCCAC
                                                                                                                                                                                                                                               CCCAGAGACATGGCCCATGTGGGCAGGACGGCCCCAGGATGGTGTGGCCGTGTTGGTCAG
                                                                                                                                                                                                                                                                                                                                      GCCTGCCTATATCCGGTGCATCAAGCCAAACGACGCCAAGCAGCCGGGTCGCTTTGATGA 1883
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACACCTCGGCTACAAGCCAGAAGAGTACAAAATGGGCAGGACTAAGATCTTCATCCGATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGTGGCCACCCAGTTCAAGATGAGCCTCCTGCAGCTCGTGGAGATCCTGAGGTCTAAGGA 1823
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TCCCATTATGAGCCAGTGCTTTGACCGGAGCGAGCTCAGTGACAAGAAGCGGCCAGAGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AGGGGAATTCCGCCTTCTGCACTATGCGGGGGGGGGGTGACCTACAGCGTGACCGGGTTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AGGGGAGTTCCGCCTTCTGCATTATGCTGGAGAGGTGACCTACAGTGTGACTGGGTTTCT
                                                                    TCCCAAGACCCTGTTTGCCACAGAGGATGCCCCTGGAGTCCCGGGGGAGAGCCTGGGCAC
                                                                                                                                                          ACACCTGGGCTACAAGCCAGAAGATACCAGATGGGCAGGACCAAGATCTTCATCCGCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /Organism="Homo sapiens"
/Ob_xref="taxon:9606"
/Ob_xref="Taxon:9606"
/Clone="IMAGE:5528227"
/Clone="Ib="NHH_MGC_72"
/Clone="ib="NHH_MGC_72"
/Lissue_type="melanotic melanoma"
/Lissue_type="melanotic melanoma"
/Lissue_type="melanotic melanoma"
/Lissue_Type="melanotic melanoma"
/Library Corgan: skin; Vector: pcMV-SPORT6; Site_1: N.
/Note="Organ: skin; Vector: pcMV-SPORT6; Site_1: N.
/Note="Corgan: skin;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ы
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               18.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 679.8; DB 13;
Pred. No. 2.7e-163;
0; Mismatches 127;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Site_1:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1031;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                : Oligo dT.
d by Life
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NotI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1644
                                                                                                              2183
                                                                                                                                                                                                     2123
                                                                                                                                                                                                                                               660
                                                                                                                                                                                                                                                                                           2063
                                                                                                                                                                                                                                                                                                                                          600
                                                                                                                                                                                                                                                                                                                                                                                       2003
                                                                                                                                                                                                                                                                                                                                                                                                                                 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1943
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4;
```

```
9
                                           Ş
                                                                                    B
                                                                                                                     Ş
                                                                                                                                                               Ъ
                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 15
BQ958694
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DEFINITION
                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JOURNAL
                                                                                                                                                 2228 TTCTCCGGGTGAAGCGATCAGCCATCTGTATCCAGTCATGGTGGCGTGGCGTGGCACACTGGGCC
                                                                                                                         2168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   source
121 TCCTCCGGGTGAAGAGATCAGCCATCTGCATCCAGTCGTGGTGGCGTGGAACACTGGGCC 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2300 CCAAGAGGAAGTGGGCAGCCCAGACCATCCGTC 2332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                901 CCCACAAGGAAATGGGGGGGGGACAAGACCCTTC 933
                                                                                                                                                                                                                                                   Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               781 AAAGATCCAGGCTGTCTGGAGGGGCTTTCACTGGGCGGCAGAATTCCTCCCGGTTAAAGA 840
                                                                          GGCAGAGCCTGGCCACAAAGATCCAAGCTGCCTGGAGGGGCCTTTCACTGGCGGCAGAAAT 120
                                                                                              GGCAGAGTCTAGCCACCAAGATCCAGGCGGCCTGGAGGGGCTTTCATTGGCGACAGAAAT 2227
                                                                                                                                                                                                                                      806;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Email: cgapbs-remail.nih.gov
Tissue Procurement: DCTD/DTP
cDNA Library Preparation: Rubin Laboratory
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
Plate: LLCM2658 row: m column: 06
High quality sequence stop: 635.
Location/Qualifiers
1 1068
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostor Mammalla; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 1068)

NIH-MGC http://mgc.nci.nih.gov/.

National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BQ958694
BQ958694.1 GI:22374172
EST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AGENCOURT_10031162 NIH_MGC_40 Homo saplens cDNA clone IMAGE:6479885
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BQ958694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             human.
                                                                                                                                                                                                                                                                                                                                  229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    mRNA sequence.
                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                              /tissue_type="carcinoma, cell line"
/lab_host="DH10B (phage-resistant)"
/note="Organ: prostate; Vector: pOTB7; Site_1: xho1;
Site_2: EcoR1; cDNA made by oligo-dT priming.
Directionally cloned into EcoR1/XhoI sites using the following 5' adaptor: GGCACGAG(G). Library constructed by Ling Hong in the laboratory of Gerald M. Rubin (University of Callfornia, Berkeley) using ZAP-CDNA synthesis kit (Stratagene) and Superscript II RT (Life Technologies).
Note: this is a NIH_MGC Library."
1 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /organism="Homo sapiens"
/db_xref="taxon:9606"
/cione="IMAGE:6479885"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /clone_lib="NIH_MGC_40"
                                                                                                                                                                                                                                                   18.6%;
85.0%;
                                                                                                                                                                                                                            Score 679.4; DB 14;
Pred. No. 3.5e-163;
0; Mismatches 137;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1068
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ďď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     mRNA
                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                 Length 1068;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Linear
                                                                                                                                                                                                                              5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EST 21-AUG-2002
                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                              4.
```

Search completed: December 9, 2002, 15:10:49 Job time: 3255 secs

```
Title:
Perfect score:
                                                    Scoring table:
                                                                                      Sequence:
                                                                                                                                                                                                     Run on:
                                                                                                                                                                                                                                      OM protein -
   Searched:
                                                                                                                                                                                                                                     protein search, using sw model
                                                                                        US-09-893-371-1
5398
1 MRYRASALGSDGVP
908470 seqs, 133250620 residues
                                 BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                   December
                                                                                        MRYRASALGSDGVRVTMESA.....LITKAKNGHLAVVAPRLNSR 1044
                                                                                                                                                                                                                                                                                         GenCore version 5.1.3 Copyright (c) 1993 - 2002 Compugen Ltd
                                                                                                                                                           9, 2002, 15:10:56; Search time 67 Seconds (without alignments) 2076.323 Million cell updates/sec
```

Maximum DB seq length: 0
DB seq length: 2000000000 Total number of hits satisfying chosen parameters:

908470

Minimum

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database A_Geneseq_101002:*

1: /SIDSZ/gcgdata/geneseq/geneseqp-embl/AA1980.DAT:*

2: /SIDSZ/gcgdata/geneseq/geneseqp-embl/AA1981.DAT:*

3: /SIDSZ/gcgdata/geneseq/geneseqp-embl/AA1982.DAT:*

4: /SIDSZ/gcgdata/geneseq/geneseqp-embl/AA1983.DAT:*

5: /SIDSZ/gcgdata/geneseq/geneseqp-embl/AA1983.DAT:*

6: /SIDSZ/gcgdata/geneseq/geneseqp-embl/AA1984.DAT:*

7: /SIDSZ/gcgdata/geneseq/geneseqp-embl/AA1985.DAT:*

8: /SIDSZ/gcgdata/geneseq/geneseqp-embl/AA1986.DAT:*

9: /SIDSZ/gcgdata/geneseq/geneseqp-embl/AA1987.DAT:*

10: /SIDSZ/gcgdata/geneseq/geneseqp-embl/AA1989.DAT:*

11: /SIDSZ/gcgdata/geneseq/geneseqp-embl/AA1990.DAT:*

12: /SIDSZ/gcgdata/geneseq/geneseqp-embl/AA1990.DAT:*

13: /SIDSZ/gcgdata/geneseq/geneseqp-embl/AA1991.DAT:*

14: /SIDSZ/gcgdata/geneseq/geneseqp-embl/AA1992.DAT:*

15: /SIDSZ/gcgdata/geneseq/geneseqp-embl/AA1993.DAT:*

16: /SIDSZ/gcgdata/geneseq/geneseqp-embl/AA1993.DAT:*

17: /SIDSZ/gcgdata/geneseq/geneseqp-embl/AA1997.DAT:*

18: /SIDSZ/gcgdata/geneseq/geneseqp-embl/AA1997.DAT:*

19: /SIDSZ/gcgdata/geneseq/geneseqp-embl/AA1999.DAT:*

20: /SIDSZ/gcgdata/geneseq/geneseqp-embl/AA1999.DAT:*

21: /SIDSZ/gcgdata/geneseq/geneseqp-embl/AA1999.DAT:*

22: /SIDSZ/gcgdata/geneseq/geneseqp-embl/AA1999.DAT:*

23: /SIDSZ/gcgdata/geneseq/geneseqp-embl/AA1999.DAT:*

23: /SIDSZ/gcgdata/geneseq/geneseqp-embl/AA1999.DAT:*

23: /SIDSZ/gcgdata/geneseq/geneseqp-embl/AA1999.DAT:*

23: /SIDSZ/gcgdata/geneseq/geneseqp-embl/AA2001.DAT:*

Pred. No. is the number of results predicted by chance to have score greater than or equal to the score of the result being part and is derived by analysis of the total score distribution. printed ۵

Result No. Score 1 5216 2 5165.5 3 3369 4 2378 5 1800.5	 96.6 1063 2: 96.6 1063 2: 95.7 1050 2: 62.4 935 2: 62.4 537 2: 33.4 1011 2:	DB 22 22 22 22 22 22 22 22 22 22 22 22 22	ID AAM39991 ABG10171 ABG10172 AAM41777 ABB71113	Description Human polypeptide Novel human diagno Novel human diagno Human polypeptide Drosophila melanog
1 52 2 5165 3 33 4 23		22 22 22	AAM39991 ABG10171 ABG10172 AAM41777	Human Novel Novel Human
5 1800		22	ABB71113	Drosopi
6 17		22	AAB64615	Human :
7 1770		22	AAB64616	Human :
8 1738		22	AAU23125	Novel h
9 1714		23	AAU97544	Human M
10 16		22	AAU23128	Novel)

Smooth muscle myo	AAW00024	17	1972	21.7	1169.5	45
	AAM41000	22	1988	21.7	1171	- T
	ABB59344	22	2056	٠,٠	1172.5	2
	AAM79838	22	1963	21.8	1174.5	Ξ
	AAM78854	22	1960	1.	1174.5	0
	AAM25750	22	1879	1.	1181	9
	AAW00604	17	631	<u>, , , , , , , , , , , , , , , , , , , </u>	1181.5	æ
	AAY94292	21	1120	1	1182	37
	.AAM39214	22	1469	_	1183.5	8
	AAB57005	21	569	2	1186	Ğ
	AAM39213	22	1453		1187.5	34
	ABB77096	23	1939	2	1191	ü
	AAM79139	22	753	2	1191	2
	AAW00603	17	697	2	1208	2
	AAM80123	22	764	2	1216	õ
	AAY94291	21	1839	2	1218	9
	AAG52408	21	1804		1223.5	õ
	AAG52409	21	1769		1223.5	7
	AAG52410	21	1754		1223.5	σ
	AAE11890	22	2057	·	1241.5	5
	AAE11891	22	2048	ω.	1241.5	4
	AAG30440	21	1495	ω	1261.5	w
	AAG30438	21	1556	ω	1269	Ñ
	AAG30439	21	1505	ω	1269	ï
	ABB58924	22	2424	ω	1272.5	õ.
	ABB97219	23	2058	w	1284.5	တ်
	AAG48640	21	1483	٠	1294	œ
	AAG48638	21	1544	4	1301.5	7
	AAG48639	21	1493	4	1301.5	ġ
	ABB62828	22	2129	4	1328	'n
	AAB42651	21	512	4.	1330.5	4
	ABB60369	22	2167	25.2	1362	ω
	ABG20610	22	759	·	1412.5	'n
	ABB97258	23	1089	29.0	1565	<u></u>

ALIGNMENTS

PR	PR	PR	₽R	PR	PR	₽R	XX	ΡF	×	ΡD	XX	PN	×	SO	X	XΣ	ΚW	KΨ	KΨ	ΚW	ΚW	XX	DE >	4 5	₹ E	4 2	×	ID	RESULT AAM399
19-00T-2000; 2000US-0593036. 29-NOV-2000; 2000US-0727344.					25-APR-2000; 2000US-0552317.	21-JAN-2000; 2000US-0488725.		26-DEC-2000; 2000WO-US34263.		26-JUL-2001.		WO200153312-A1.	•	Homo sapiens.		leukaemia.	chemokinetic; thrombolytic; drug screening; arthritis; inflammation;	amyotrophic lateral sclerosis; Shy-Drager Syndrome; chemotactic;	haemost		<pre>Human; nootropic; immunosuppressant; cytostatic; gene therapy; cancer;</pre>		Human polypeptide SEO ID NO 3136.	TE OCT TOOL (TITLE GHET)		ובעע נייחח	AAW30001.	AAM39991 standard; Protein; 1063 AA.	RESULT 1 AAM39991

```
망
                        Ş
                                                В
                                                                   δ
                                                                                           д
                                                                                                                Q
                                                                                                                                                          Ş
                                                                                                                                                                                   В
                                                                                                                                                                                                                                                    ρ
                                                                                                                                        В
                                                                                                                                                                                                        S
                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                           SXCCCCCCCCCCCCCCXTXTTXRXX
                                                                                                                                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Sin
Matches 1003;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The invention relates to human nucleic acids (AAI57798-AAI61369) and the encoded polypeptides (AAM38642-AAM42213) with nootropic, Immunosuppressant and cytostatic activity. The polynucleotides are useful in gene therapy. A composition containing a polypeptide or polynucleotide of the invention may be used to treat diseases of the peripheral nervous system, such as peripheral nervous injuries, peripheral neuropathy and localised neuropathies and central nervous system diseases, such as alzheimer's, Parkinson's disease, Huntington's disease, amyotrophic lateral sclerosis, and Shy-Drager Syndrome. Other uses include the utilisation of the activities such as: Immune system suppression, Activin/Inhibin activity, chemotactic/chemokinetic activity, haemostatic and thrombolytic activity, cancer diagnosis and therapy, drug screening, assays for receptor activity, arthritis and inflammation, leukaemias and c. N s diagnosars.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           C.N.S disorders.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Tang
Wang
    506
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Such
                           487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Example 4;
                                                 446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Novel nucleic acids and
                                                                     427
                                                                                             386
                                                                                                                  367
                                                                                                                                        326
                                                                                                                                                              307
                                                                                                                                                                                    266
                                                                                                                                                                                                          247
                                                                                                                                                                                                                                 206
                                                                                                                                                                                                                                                       1.87
                                                                                                                                                                                                                                                                              146
                                                                                                                                                                                                                                                                                                    127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (HYSE-)
                                                                                                                                                                                                                                                                                                                          86
                                                                                                                                                                                                                                                                                                                                              67
                                                                                                                                                                                                                                                                                                                                                                     26
YLVKGQCAKVSSINDKSDWKVMRKALSVIDFTEDEVEDLLSIVASVLHLGNIHFAADEDS
                                                                                                                                                                                                                                                                                                                                                               DLTFLEKLEDTVKPHPHFLTHKLADQKTRKSLDRGEFRLLHYAGEVTYSVTGFLDKNNDL
                                           QQLFIELPLKSEQEEYEAEGIAWEPVQYFNNKIICDLVEEKFKGIISILDEECLRPGEAT
                                                        QQLFIELTLKSEQEEYEAEGIAWEPVQYFNNKIICDLVEEKFKGIISILDEECLRPGEAT
                                                                                       NAQVTTENQLKYLTRLLGVEGTTLREALTHRKIIAKGEELLSPLNLEQAAYARDALAKAV
                                                                                                                                                                                                                                        FDFKGAPVGGHILSYLLEKSRVVHQNHGERNFHVFYQLLEGGEEETLRRLGLERNPQSYL
                                                                                                                                                                                                                                                                        KTEATKKLLQFYAETCPAPQRGGAVRDRLLQSNPVLEAFGNAKTLRNDNSSRFGKYMDVQ
                                                                                                                                                                                                                                                                                     KTEATKRLLQEYAETCPAPERGGAVRDRLLQSNPVLEAFGNAKTLRNDNSSRFGKYMDVQ
                                                                                                                                                                                                                                                                                                                     NAQVTTENQLKYLTRLLSVEGSTLREALTHRKITAKGEELLSPLNLEQAAYARDALAKAV
                                                                                                                                                                                                                            FDFKGAPVGGHILSYLLEKSRVVHQNHGERNFHIFYQLLEGGEEETLRRLGLERNPQSYL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  , r v
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  as
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2001-442253/47
DB; AAI59147.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        The sequence data
                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 central nervous
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               HYSEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Liu C
Wang Z
Zhou
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                           1063
                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               , c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ID NO 3136; 10078pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                           A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Asundi V,
Wehrman T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Goodrich R,
                                                                                                                                                                                                                                                                                                                                                                                                                          96.6<del>8</del>;
96.6<del>8</del>;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 polypeptides, useful for treating
system injuries -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          for this
                                                                                                                                                                                                                                                                                                                                                                                                              22;
                                                                                                                                                                                                                                                                                                                                                                                                                        Score 5216;
Pred. No. 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Chen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Хu
                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 hen R, Ma
Xu C, Xue
Drmanac R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                injuries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        patent did not
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Y,
S AJ,
RT;
                                                                                                                                                                                                                                                                                                                                                                                                                                   DB
                                                                                                                                                                                                                                                                                                                                                                                                             13;
                                                                                                                                                                                                                                                                                                                                                                                                                                   22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Qian XB,
Yang Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        form
                                                                                                                                                                                                                                                                                                                                                                                                                                  Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        part of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ren F,
Zhang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          disorders
                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            <u>ت</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Wang
                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        printed
                      546
                                                                                         445
                                                                                                                                     385
                                                                                                                                                          366
                                                                                                                                                                                325
                                                                                                                                                                                                       306
                                                                                                                                                                                                                                                                                               186
                                                                                                                                                                                                                             265
                                                                                                                                                                                                                                                                          205
                                                                                                                                                                                                                                                                                                                                                                 85
                                                                                                                                                                                                                                                  246
                                                                                                                                                                                                                                                                                                                      145
                                                                                                                                                                                                                                                                                                                                                                                       66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ö
                                                                                                                                                                                                                                                                                                                                                                                                            0;
```

```
RESULT 2
ABG10171
ID ABG1
                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                              Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       QY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DЪ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DЪ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ρy
New isolated polynucleotide and encoded polypeptides, useful in diagnostics, forensics, gene mapping, identification of mutatics responsible for genetic disorders or other traits and to assess biodiversity
                                                                                                                                                                                                                                                                                                                                                                                           1046
                                                  N-PSDB;
                                                                                                     (HYSE-)
                                                                                                                         31-MAR-2000;
23-AUG-2000;
                                                                                                                                                         30-MAR-2001;
                                                                                                                                                                               11-OCT-2001
                                                                                                                                                                                                                                             Human; chromosome food supplement; r
                                                                                                                                                                                                                                                                                                                      ABG10171;
                                                                                                                                                                                                                                                                                                                                        ABG10171 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                1027
                                                                                                                                                                                                                                                                            Novel human
                                                                                                                                                                                                                                                                                                13-FEB-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                       967
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             926
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 907
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       866
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                806
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          746
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        547
                                                                                                                                                                                                                                                                                                                                                                                                     TKAKNGHLAVVAPRLNSR
                                                            2001-639362/73
                                                                                                                                                                                                                                           supplement;
                                                                                                                                                                                                                                                                                                                                                                                          TKAKNGHLAVVAPRLNSR
                                                                                                                                                                                                                                                                                                                                                                                                                                  NKQKGDVVLQSDHVLETLTKTALSANRVNSININQGSITFAGGPGRDGTIDFTPGSELLI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VKYDRKGYKPRPRQLLLTPSAVVIVEDAKVKQRIDYANLTGISVSSLSDSLFVLHVQRED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EWKQQLQQKAVASEIFKGKKDNYPQSVPRLFISTRLGTEEISPRVLQSLGSEPIQYAVPV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RGFHWRQKFLRVKRSAICIQSWWRGTLGRRKAAKRKWAAQTIRRLIRGFILRHSPRCPEN
                                                                                                                                                                                                                                                                                                                                                                                                                                            NKQKGDVVLQSDHVIETLTKTALSADRVNNININQGSITFAGGPGRDGIIDFTSGSELLI 1026
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EWKQQLQQKAVASEIFKGKKDNYPQSVPRLFISTRLGTDEISPRVLQALGSEPIQYAVPV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WAGRPQDGVAVLVRHLGYKPEEYKMGRTKIFIREPKTLFATEDSLEVRRQSLATKIQAAW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LFRNLKETMCSSMNPIMAQCFDKSELSDKKRPETVATQFKMSLLQLVEILRSKEPAYIRC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WAGRPQDGVAVLVRHLGYKPEEYKMGRTKIFIRFPKTLFATEDALEVRRQSLATKIQAAW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     IKPNDAKQPGRFDEVLIRHQVKYLGLMENLRVRRAGFAYRRKYEAFLQRVKSLCPETWPM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LFRNLKETMCSSKNPIMSQCFDRSELSDKKRPETVATQFKMSLLQLVEILQSKEPAYVRC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         IKPNDAKQPGREDEVLIRHQVKYLGLLENLRVRRAGFAYRRKYEAFLQRYKSLCPETWPT
                                                                                 RT,
                                                                                                     HYSEQ
                                                                                                                                                                                                                                                                         diagnostic
                                                                                                                                                        2001WO-US08631
                                                                                Liu
                                                                                                                                                                                                                                                                                              (first entry)
                                                                                                                         2000US-0540217
2000US-0649167
                                                                                                    INC.
                                                                                Ç
                                                                                                                                                                                                                                        mapping; gene mapping; gene therapy; forensic
medical imaging; diagnostic; genetic disorder.
                                                                                                                                                                                                                                                                                                                                        Protein;
                                                                              Tang
                                                                                                                                                                                                                                                                         protein #10162.
                                                                                                                                                                                                                                                                                                                                                                                                              1044
                                                                                                                                                                                                                                                                                                                                        A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       906
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             865
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      805
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          786
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                745
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         685
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  625
```

mutations

```
for identifying expressed genes. (I) is useful in gene therapy techniques (C) to restore normal activity of (II) or to treat disease states involving (II). (II) is useful for generating antibodies against it, detecting or quantitating a polypeptide in tissue, as molecular weight markers and as a food supplement. (II) and its binding partners are useful in medical imaging of sites expressing (II). (I) and (II) are useful for treating (II) and (II) are useful for treating (II) and (II) are useful for treating (II) and (II) are useful for treating (II). (I) and (II) are useful for treating (II). (I) and (II) are useful for treating (II). (II) and (II) are useful for treating (II). (II) and (II) are useful for treating (II) are useful for the polypeptide and polynucleotide sequences have applications in (II) are useful for generating (II). (II) and (II) are useful for the polypeptide and polynucleotide sequences have application of mutations (II) are useful for generating (II). (II) and (II) are useful for mutations (II) are useful for generating (II) are useful for mutations (II) are useful for generating (II). (II) and (II) are useful for mutations (II) are useful for generating (II) are useful for generating (II). (II) and (II) are useful for generating (II) are useful for generating (II) are useful for generating (II). (II) and (II) are useful for generating (II) are useful for generating (II) are useful for generating (II). (II) and (II) are useful for generating (II) are useful for generating (II) are useful for generating (II). (II) and (II) are useful for generating (II)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        polypeptide (II) sequences. (I) is useful as hybridisation probes, polymerase chain reaction (PCR) primers, oligomers, and for chromos and gene mapping, and in recombinant production of (II). The polynucleotides are also used in diagnostics as expressed sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Claim
                                                                                                                                                                                                                                                                                                                   432
                                                                                                                                                                                                                                                                                                                                                                                                                                           372
   607
                                                                552
                                                                                                                                                                                        492
                                                                                                                                                                                                                                                  487
                                                                                                                                                                                                                                                                                                                                                                             427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         7
                                                                                                                                                                                                                                                                                                                                                                                                                                    YSRTFTWLVRKINRSLASKDAESPSWRSTTVLGLLDIYGFEVFQHNSFEQFCINYCNEKL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ALGSDGVRVTMESALTARDRVGVQDFVLLENFTSEAAFIENLRRRFRENLIYTYIGPVLV
                                                      NAQVTTENQLKYLTRLLGVEGTTLREALTHRKIIAKGEELLSPLNLEQAAYARDALAKAV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   YLVKGQCAKVSSINDKSDWKVMRKALSVIDFTEDEVEDLLSIVASVLHLGNIHFAADEDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SVNPYRDLQIYSRQHMERYRGVSFYEVPPHLFAVADTVYRALRTERRDQAVMISGESGAG
IKPNDAKQPGREDEVLIRHQVKYLGLMENLRVRRAGEAYRRKYEAFLQRYKSLCPETWPM
                                                                                                                                                                                     DLTFLEKLEDTVKHHPHFLTHKLADQRTRKSLGRGEFRLLHYAGEVTYSVTGFLDKNNDL
                                                                                                                                                                                                                     DLTFLEKLEDTVKPHPHFLTHKLADQKTRKSLDRGEFRLLHYAGEVTYSVTGFLDKNNDL
                                                                                                                                                                                                                                                                                                                QQLFIELPLKSEQEEYEAEGIAWEPVQYFNNKIICDLVEEKFKGIISILDEECLRPGEAT
                                                                                                                                                                                                                                                                                                                                             QQLFIELTLKSEQEEYEAEGIAWEPVQYFNNKIICDLVEEKFKGIISILDEECLRPGEAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAOVTTENOLKYLTRLLSVEGSTLREALTHRKIIAKGEELLSPLNLEQAAYARNALAKAV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FDFKGAPVGGHILSYLLEKSRVVHQNHGERNFHIFYQLLEGGEEETLRRLGLERNPQSYL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FDFKGAPVGGHILSYLLEKSRVVHQNHGERNFHVFYQLLEGGEEETLRRLGLERNPQSYL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SVNPYRDLQIYSRQHMERYRGVSFYEVPPHLFAVADTVYRALRTERRDQAVMISGESGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ALGSDGVRVTMDSALTARDRVGVQDFVLLENFTSEAAFIENLRRRFRENLIYTYIGPVLV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1050
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ij
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      relates to isolated polynucleotide (I) and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A
A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   No 40530; 103pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       95.7%;
95.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       24; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 5165.5;
Pred. No. 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DВ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1050
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            chromosome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                            491
                                                                                                                                                                                                                                                                                                                                                                          486
                                                                                                                                                                                                                                                                                                                                                                                                                                       431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         66
                                                                                                                       606
                                                                                                                                                                                     551
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  371
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 tags
```

δõ

В

В Š

Ş Вр δ

chromosome

δ В Š 밁 Q Вb δ Дb Qy В Q DЬ οy

Вр

```
RESULT 3
ABG110172
ID ABG1
XX ABG1
XX ABG1
XX ABG1
XX INOVE
XX INO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
The invention relates to isolated polynucleotide (I) and polypeptide (II) sequences. (I) is useful as hybridisation probes, polymerase chain reaction (PCR) primers, oligomers, and for chroma and gene mapping, and in recombinant production of (II). The
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human;
food si
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1032
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1026
                                                                                                                                                                                                                                                                                     New isolated polynucleotide and encoded polypeptides, useful diagnostics, forensics, gene mapping, identification of mutar responsible for genetic disorders or other traits and to assume the disorders of the contract of th
                                                                                                                                                                                      Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                 N-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Drmanac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         31-MAR-2000;
23-AUG-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Novel human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ABG10172;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ABG10172 standard; Protein; 935
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                30-MAR-2001; 2001WO-US08631.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            11-OCT-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WO200175067-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    13-FEB-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (HYSE-) HYSEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     912
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         907
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           732
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            672
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            612
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VKYDRKGYKPRPRQLLLTPS-AVVIVEDAKVKQRIDYANLTGISVSSLSDSLFVLHVQRE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AFFLDHVRASFLLNLRRQLPRNVLDTSWPTPPPALREASELLRELCMKNWWWKYCRSISP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ITKAKNGHLAVVAPRLNSR 1044
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RGFHWRQKFLRVKRSAICIQSWWRGTLGRRKAAKRKWAAQTIRRLIRGFILRHSPRCPEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WAGRPQDGVAVLVRHLGYKPEEYKMGRTKIFIRFPKTLFATEDALEVRRQSLATKIQAAW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WAGRPQDGVAVLVRHLGYKPEEYKMGRTKIFIRFPKTLFATEDSLEVRRQSLATKIQAAW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2001-639362/73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             supplement;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ITKAKNGHLAVVAPRLNYR 1050
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DNKQKGDVVLQSDHVIETLTKTALSADRVNNININQGSITFAGGPGRDGIIDFTSGSELL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VKYDRKGYKPRSRQLLLTAQRPFVIVEDAKVKQRIDYANLTGISVSSLSDSLFVLHVQRA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AFFLDHVRTSFLLNLRRQLPRNVLDTSWPTPPPALREASELLRELCIKNMVWKYCRSISP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RGFHWRQKFLRVKRSAICIQSWWRGTLGRRKAAKRKWAAQTIRRLIRGFILRHAPRCPEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     IKPNDAKQPGRFDEVLIRHQVKYLGLLENLRVRRAGFAYRRKYEAFLQRYKSLCPETWPT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   chromosome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RT,
                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAS74359
                                                                                                                                                                                      SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    diagnostic protein #10163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Liu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2000US-0649167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2000US-0540217
                                                                                                                                                                                      IJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ċ
                                                                                                                                                                                      Ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         mapping; gene ma
medical imaging;
                                                                                                                                                                                      40531;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Tang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ΥŢ
                                                                                                                                                                                  103pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         gene mapping; gene therapy;
naging; diagnostic; genetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AA
                                                                                                                                                                                  English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 disorder.
                                                                                                                                                                                                                                                                                                 mutations
o assess
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               forensic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1031
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1025
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    786
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            671
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     971
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         965
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              911
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  906
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           851
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               846
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           791
```

```
В
                                                                                                                                                                        õ
                                                                                                                                                                                                     g
                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CC polynucleotides are also used in diagnostics as expressed sequence tags CC for identifying expressed genes. (I) is useful in gene therapy techniques CC to restore normal activity of (II) or to treat disease states involving CC (II), (II) is useful for generating antibodies against it, detecting or CC quantitating a polypeptide in tissue, as molecular weight markers and as climaging of sites expressing (II), (I) and (II) are useful in medical continuity of the polypeptide and polynucleotide sequences have applications in CC diagnostics, forensics, gene mapping, identification of mutations and to produce other types of data and products dependent on DNA and CC amino acid sequences of data and products dependent on DNA and CC amino acid sequences of the invention.

CC Note: The sequence data for this patent did not appear in the printed constituent, but was obtained in electronic format directly from wipo axi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local :
     887
                                 699
                                                           827
                                                                                        639
                                                                                                                                               602
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence
                                                                                                                   767
                                                                                                                                                                                                       542
                                                                                                                                                                                                                                647
                                                                                                                                                                           707
                                                                                                                                                                                                                                                            494
                                                                                                                                                                                                                                                                                        604
                                                                                                                                                                                                                                                                                                                  434
                                                                                                                                                                                                                                                                                                                                             544
                                                                                                                                                                                                                                                                                                                                                                         374
                                                                                                                                                                                                                                                                                                                                                                                                    484
                                                                                                                                                                                                                                                                                                                                                                                                                                314
                                                                                                                                                                                                                                                                                                                                                                                                                                                         424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 370
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local _ 662;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                190 KGAPVGGHILSYLLEKSRVVHONHGERNFHVFYQLLEGGEEETLRRLGLERNPQSYLYLV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        82
                                                                               LLRELCIKNMVWKYCRSISPEWKQQLQQKAVASEIFKGKKDNYPQSVPRLFISTRLGTDE
                                         LLRELCMKNMVWKYCRSISPEWKQQLQQKAVASETFKGKKDNYPQSVPRLFISTRLGTEE
                                                                                                                                          TEDALEVRRQSL---
                                                                                                                                                       TEDSLEVRROSLATKIQAAWRGFHWRQKFLRVKRSAICIOSWWRGTLGRRKAAKRKWAAQ
ISPRVLQSLGSEPIQYAVPVVKYDRKGYKPRPRQLLLTPSAVVIVEDAKV
                                                                                                                                                                                              RKYEAFLQRYKSLCPETWPTWAGRPQDGVAVLVRHLGYKPEEYKMGRTKIFIRFPKTLFA
                                                                                                                                                                                                             RKYEAFLQRYKSLCPETWPMWAGRPQDGVAVLVRHLGYKPEEYKMGRTKIFIRFPKTLFA 706
                                                                                                                                                                                                                                                    VRCIKPNDAKQPGDSRQRQPADHGAPPTPGRFDEVLIRHQVK------AGFAYR
                                                                                                                                                                                                                                                                   IRCIKPNDAKQ-------PGREDEVLIRHQVKYLGLMENLRVRRAGEAYR 646
                                                                                                                                                                                                                                                                                                          NDLLFRNLKETMCSSMNPIMAQCFDKSELSDKKRPETVATQFKMSLLQLVEILRSKEPAY
                                                                                                                                                                                                                                                                                                                                                                  EATDLTFLEKLEDTVKHHPHFLTHKLADQRTRKSLGRGEFRLLHYAGEVTYSVTGFLDKN
                                                                                                                                                                                                                                                                                                                                                                                EATDLTFLEKLEDTVKPHPHFLTHKLADOKTRKSLDRGEFRLLHYAGEVTYSVTGFLDKN
                                                                                                                                                                                                                                                                                                                                                                                                                       EKLOOLFIELTLKSEQEEYEAEGIAWEPVQYFNNKIICDLVEEKFKGIISILDEECLRPG
                                                                                                                                                                                                                                                                                                                                                                                                                                       EKLQQLFIELTLKSEQEEYEAEGIAWEPVQYFNNKIICDLVEEKFKGIISILDEECLRPG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TETWLVGKINRSLASKGRRPAFPLSWSCVPTEPLWALLLPY-----SFEQFCINYCN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TFTWLVRKINRSLASK---DAESPSWR---STTVLGLLDIYGFEVFQHNSFEQFCINYCN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KGQCAKVSSINDKSDWKVMRKALSVIDETEDEVEDLLSIVASVLHLGNIHFAADEDSNAQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                KGAPVGGHILSYLLEKSRVVHQNHGERNFHIFYQLLEGGEEETLRRLGLERNPQSYLYLV 141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    935
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        62.4%;
                                                                                                                                       ---------AICIQSWWRGTLGRRKAAKRKWAAQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 3369; DB 22;
Pred. No. 6.2e-278;
2; Mismatches 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length
936
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    935;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         66;
                                                                                  698
                                                                                                                                         638
                                                                                                                                                                                              601
                                                                                                                                                                                                                                                    541
                                                                                                                                                                                                                                                                                                             493
                                                                                                                                                                                                                                                                                                                                       603
                                                                                                                                                                                                                                                                                                                                                                                              543
                                                                                                                                                                                                                                                                                                                                                                                                                                                   483
                                                                                                                                                                                                                                                                                                                                                                  433
                                                                                                                                                                                                                                                                                                                                                                                                                        373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        6;
```

Š Вb δÃ 밁 Š

Query Match Best Local Similarity

44.18; 96.78;

Score Pred.

2378; DB 22; No. 9.1e-194;

Length

```
RESULT 4
AAM41777
ID AAM4
AC A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DЬ
                                                                                                The invention relates to human nucleic acids (AA157798-AA161369) and the encoded polypeptides (AAM38642-AAM42213) with nootropic, immunosuppressant and cytostatic activity. The polynucleotides are useful in gene therapy. A composition containing a polypeptide or polynucleotide of the invention may be used to treat diseases of the peripheral nervous system, such as peripheral nervous injuries, peripheral neuropathy and localised neuropathies and central nervous system diseases, such as Alzheimer's, Parkinson's disease, Huntington's disease, amyotrophic lateral sclerosis, and Shy-Drager Syndrome. Other uses include the utilisation of the activity. Prager Syndrome. Other uses include the Activin/inhibin activity, chemotactic/chemokinctic activity, haemostatic and thrombolytic activity, cancer diagnosis and therapy, drug screening, assays for receptor activity, arthritis and inflammation, leukaemias and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               21-JAN-2000;
25-APR-2000;
09-JUL-2000;
19-JUL-2000;
19-JUL-2000;
                                             Note: The sequence specification.
  Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Tang
Wang
2hao
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Novel nucleic acids and such as central nervous
                                                                                                                                                                                                                                                                                                                                                                                                                                          Example
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      N-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (HYSE-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human; nootropic; immunosuppressant; cytostatic; gene therapy; cance peripheral nervous system; neuropathy; central nervous system; CNS; Alzhelmer's; Parkinson's disease; Huntington's disease; haemostatic; amyotrophic lateral sclerosis; Shy-Drager Syndrome; chemotactic; chemokinetic; thrombolytic; drug screening; arthritis; inflammation;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   29-NOV-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      14-SEP-2000;
19-OCT-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        26-DEC-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WO200153312-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      26-JUL-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           leukaemia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                22-OCT-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAM41777;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAM41777 standard;
                                                                     .N.S disorders.
ote: The sequer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             759
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          YT,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2001-442253/47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   polypeptide
                                                                                                                                                                                                                                                                                                                                                                                                                                          2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAI60933
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HYSEQ INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Liu (
Wang z
Zhou
                                                                                                                                                                                                                                                                                                                                                                                                                              SEQ ID NO 6708; 10078pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2000US-0488725.
2000US-0552317.
2000US-05598042.
2000US-0620312.
2000US-0652450.
2000US-06621450.
2000US-0663193036.
2000US-0693036.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                u C,
'Z,
'u P,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2000WO-US34263
AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Asundi V, Ch
Wehrman T, X
Goodrich R,
                                                                 data
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQ ID NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Protein;
                                                                 for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              polypeptides, useful system injuries -
                                                                 this
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Chen R,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  6708
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     hen R, Ma Y,
Xu C, Xue AJ,
Drmanac RT;
                                                                 patent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AΑ
                                                                 did
                                                                 not
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Qian
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Yang
                                                              form
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    treating
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          gene therapy; cancer;
ervous system; CNS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        yχΒ,
                                                            part
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ren F,
Zhang ,
                                                              of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      disorders
                                                            the printed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ٦,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Wang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ď,
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                   Disclosure; SEQ ID
                                                New isolated nucleic acid
genes from Drosophila and
                                                                                                           Venter JC,
                                                                                                                              (PEKE )
                                                                                                                                                 23-MAR-2000;
11-JUL-2000;
                                                                                                                                                                              23-MAR-2001; 2001WO-US09231
                                                                                                                                                                                                   27-SEP-2001.
                                                                                                                                                                                                                       WO200171042-A2
                                                                                                                                                                                                                                          Drosophila melanogaster
                                                                                                                                                                                                                                                              pharmaceutical.
                                                                                                                                                                                                                                                                     Drosophila; developmental biology; cell signalling; insecticide;
                                                                                                                                                                                                                                                                                          Drosophila melanogaster polypeptide SEQ
                                                                                                                                                                                                                                                                                                               26-MAR-2002
                                                                                                                                                                                                                                                                                                                                                     ABB71113 standard;
                                                                                                                                                                                                                                                                                                                                                                                                       480
                                                                                                                                                                                                                                                                                                                                                                                                                          427
                                                                                                                                                                                                                                                                                                                                                                                                                                              420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          7
 invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2001-656860/75
DB; ABL15216.
                                                                                                                                                                                                                                                                                                                                                                                                      QQLFIELTLKSEQEEYEAEGIAWEPVQYFNNKIICDLVEEKFKGIISILDEECLRPGE 537
                                                                                                                                                                                                                                                                                                                                                                                                               QQLFIELTLKSEQEEYEAEGIAWEPVQYFNNKIICDLVEEKFKGIISILDEECLRPGE 484
                                                                                                                                                                                                                                                                                                                                                                                                                                                      YSRTFTWLVRKINRSLASKDAESPSWRSTTVLGLLDIYGFEVFQHNSFEQFCINYCNEKL 426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAQVTTENQLKYLTRLLGVEGTTLREALTHRKIIAKGEELLSPLNLEQAAYARDALAKAV 366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           YLVKGQCAKVSSINDKSDWKVVRKALTVIDFTEDEVEDLLSIAASVLHLGNIHFAANEES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    YLVKGQCAKVSSINDKSDWKVWRKALSVIDFTEDEVEDLLSIVASVLHLGNIHFAADEDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FDFKGAPVGGHILSYLLEKSRVVHQNHGERNFHIFYQLLEGGEEETLRRLGLERNPQSYL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FDFKGAPVGGHILSYLLEKSRVVHQNHGERNFHVFYQLLEGGEEETLRRLGLERNPQSYL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SVNPYRDLQIYSRQHMERYRGVSFYEVPPHLFAVADTVYRALRTERRDQAVMISGESGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ALGSDGVRVTMESALTARDRVGVQDFVLLENFTSEAAFIENLRRRFRENLIYTYIGPVLV
                                                                                                                                                                                                                                                                                                                                                                                                                                            YSRTFTWLVGKINRSLASKDVESPSWRSTTVLGLLDIYGFEVFQHNSFEQFCINYCNEKL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAQVTTENQLKYLTRLLSVEGSTLREALTHRKI I AKGEELLSPLNLEQAAYARDALAKAV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ALGSDGVRVTMESALTARDRVGVQDFVLLENFTSEAAFIENLRRRFRENLIYTYIGPVLV 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               462;
                                                                                                                              PE CORP NY
                                                                                                          Adams M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                  2000US-191637P
2000US-0614150
                                                                                                                                                                                                                                                                                                              (first entry)
 relates
                    NO
                                                                                                                                                                                                                                                                                                                                                      Protein;
                    40131;
 ç
                                                                                                           PWD,
 an
                                                detection reagent for detecting for elucidating cell signalling
                                                                                                                                                                                                                                                                                                                                                      1011
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8
 isolated
                  21pp +
                                                                                                          Myers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                      ₿
                  Sequence
 nucleic
                                                                                                           E
                                                                                                                                                                                                                                                                                          Ħ
                                                                                                                                                                                                                                                                                          NO 40131
 acid
                 Listing; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8
 detection
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                1000
and c
reagent
                                                 0 or more cell-cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
```

```
밁
                               δõ
                                                                 В
                                                                                                 Ş
                                                                                                                                     밁
                                                                                                                                                                 δÃ
                                                                                                                                                                                                         망
                                                                                                                                                                                                                                        Q
                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                          δÃ
                                                                                                                                                                                                                                                                                                                                                  DЪ
                                                                                                                                                                                                                                                                                                                                                                                 QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches 426;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (ABB57737-ABB72072)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    capable of detecting 1000 or more genes from Drosophila. The invention useful in developmental biology and in elucidating cell signalling and cell-cell interactions in higher eukaryotes for the development of insecticides, therapeutics and pharmaceutical drugs. The invention discloses genomic DNA sequences (ABL16176-ABL30511), expressed DNA sequences (ABL101840-ABL16175) and the encoded proteins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The sequence data for this patent did not form specification, but was obtained in electronic fat ftp.wipo.int/pub/published_pct_sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
                                                                                                                                                                                                           593
                                                                                                                                                                                                                                                                                537
                                                                                                                                                                                                                                                                                                                                                    479
                                                                                                                                                                                                                                                                                                                                                                                                                        419
                                                                                                                                                                                                                                                                                                                                                                                                                                                           443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         æ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GVQDFVLLENFTSEAAFIENLRRRFRENLIYTYIGPVLVSVNPYRDLQIYSRQHMERYRG
                                                                                                                                                       GVAVLVRHLGYKPEEYKMGRTKIFIRFPKTLFATEDSLEVRRQSLATKIQAAWRGFHWRQ
                                                                                                                                                                                                                                                                                                 MCSSMNPIMAQCFDKSELSDKKRPETVATQFKMSLLQLVEILRSKEPAYIRCIKPNDAKQ 614
                                                                                                                                                                                                                                                                                                                                                                     HFLTHKLADQKTRKSL-DRGEFRLLHYAGEVTYSVTGFLDKNNDLLFR-----NLKET 554
                                                                                                                                                                                                                                                                                                                                                                                                                                            EAEGIAWEPVQYFNNKIICDLVEEKFKGIISILDEECLRPGEATDLTFLEKLEDTVKPHP 502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ASKDAESPSWRSTTVLGLLDIYGFEVFQHNSFEQFCINYCNEKLQQLFIELTLKSEQEEY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            QREGIEWTNIEYFNNKIICDLVEQPHKGIIAIMDEACLSVGKVTDDTLLGAMDKNLSKHP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LFRGSKTQA-RFNSVIGVLDIYGFEIFDSNSFEQFCINYCNEKLQQLFIELVLKQEQEEY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LOVTETELSTALTKRVIAAGGNVMQKDHNATQAEYGKDALAKAIYDRLFTWIISRINRAI 359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LGVEGTTLREALTHRKIIAKGEELLSPLNLEQAAYARDALAKAVYSRTFTWLVRKINRSL 382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SDWKYMRKALSVIDFTEDEVEDLLSIVASVLHLGNIHFAADEDSNAQVTTENQLKYLTRL 322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LEKSRYVQQQPGERNFHSFYQLLRGANDNELRQYELQKETGKYHYLNQG----SMDILTEK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LEKSRVVHQNHGERNFHVFYQLLEGGEEETLRRLGLERNPQSYLYLVKGQCAKVSSINDK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ---ERGGAVRDRLLQSNPVLEAFGNAKTLRNDNSSRFGKYMDVQFDFKGAPVGGHILSYL 202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RELFENAPHLFAIADSAYRVLKQRQQDTCILISGESGAGKTEASKIIMKYIAAVTNAQGQ 126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VSFYEVPPHLFAVADTVYRALRTERRDQAVMISGESGAGKTEATKRLLQFYAETCPAP--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GVQDFVLLDQVSME-KFMDNLRKRFQNGSIYTYIGEVCVSMNPYRQMNIYGPETIRKYKG
                               RASFLLNLRRQL--PRNVLD----TSWPTPPPALREASELLR---ELCMKNMV-WKYCRS 843
                                                                                                 KFLRVKRSAICIOSWWRGTLGRRKAAKRKWAAQTIRRLIRGFILRHSPRCPENAFFLDHV
                                                                                                                                     GVRVLIEEKKF-AQDVKYGHTKIFIRSPRTLFALEHQRNEMIPHIVTLLQKRVRGWIVRR
                                                                                                                                                                                                                                          PGRFDEVLIRHQVKYLGLMENLRVRRAGFAYRRKYEAFLQRYKSLCPETWPMW-AGRPQD
                                                                                                                                                                                                                                                                              NLSEMWPEGAQDIKKT----TKRPLTAGTLFQRSMADLVVTLLKKEPFYVRCIKPNDLKS
                                                                                                                                                                                                                                                                                                                                                  HYTSRQL--KPTDKELKHREDFRITHYAGDVIYNINGFIEKNKDTLYQDFKRLLHNSKDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SDYKGTCNAFKTLGFSTDEVQTTWRTTAAVLHLGNVEFQTTED-ELVISNKQHLKSTAKL
-SYVQELANRLRKAKQMRDYGKSIQWPQPPLAGRKVEAKLHRMFDFWRANMILHKYPRS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1011 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative 169; Mismatches 341;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            33.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 1800.5; DB 2: Pred. No. 4.5e-144;
                                                                     AAITIVRAYKAYKLR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    format directly from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     part of the printed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                      733
                                                                                                                                                                                                                                                                                                                                                  536
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          87
                                                                                                                                                                                                                                            673
                                                                                                                                                                                                                                                                                                                                                                                                                        478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        66
                                                                                                                                                                                                           652
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WIPO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             29;
```

В Š Вb Ş Ъ 5 В δÃ

7;

```
RESULT 6
AAB64615
ID
AAB64615
XX
AAB64615
XX
AAB64615
XX
AAB64615
XX
AAB64615
AX
AAB64615
AX
AAB64615
AX
AAB64615
AX
AAB64615
AAB64616
AAB66616
AAA66616
AAA
                                      CC The invention relates to the isolation of genes AAF32757-F32803 encoding CC the human secreted proteins AAB64549-B64594. The sequence is a search CC result from a BLASTX homology search. The genes and proteins are useful CC for preventing, ameliorating or treating medical conditions, e.g. by CC protein or gene therapy. The genes are isolated from a range of human CC antibodies and (antibogonists are useful in the diagnosis, treatment CC antibodies and (antibogonists are useful in the diagnosis, treatment CC other cancers of the adrenal gland, bone, bone marrow, breast, CC antibodies e.g. Addison's disease, allergies, autoimmune haemolytic CC disorders e.g. Addison's disease, allergies, autoimmune haemolytic CC anaemia, autoimmune thyroiditis, diabetes mellitus, Crohn's disease, CC multiple sclerosis, rheumatoid arthritis and ulcerative colitis; (c) cardiovascular disorders such as myocardial ischaemias; (d) wound CC and (f) infectious diseases such as viral, bacterial, fungal and
                                  healing; (e) neurospand (f) infectious diseases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Disclosure; Page 516-518;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Isolated nucleic acid molecule encoding a human secreted protein used in preventing, treating or ameliorating a medical condition
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           cytostatic; immunosuppressive; nootropic; nauroprotective; antiviral; antiallergic; hepatotropic; antidiabetic; antiinflammatory; antiulcer; vulnerary; anticonvulsant; antibacterial; antifungal; antiparastic; cardiant; gene therapy; cancer; immune disorder; cardiovascular disorder;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (HUMA-) HUMAN GENOME (ROSE/) ROSEN C A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-JUN-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WO200077197-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Cytostatic; immunosuppressive;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           21-DEC-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               neurological disease; infection; human; secreted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human secreted protein BLAST search
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    22-MAR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAB64615;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAB64615
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             904
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               945
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 845
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KKYHDLTGTELRVNYTTNISCRLDGKARIITVEAASNVEVPNFRPKEGNIIFEVP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LTSISVSPGRDQLIVFH----SKNK-DLVFSLESEY----TPLKEDRIGEVVGIVC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HPADGETFQQVLFSSFVKKFNHFN-KQANRAFIVSDSTIHKLDGIKNKFKDMKRTIKIRE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ••••••NININQGSITFAGGPGRDGIIDFTSGSELLITKAKNGHLAVVAP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -----EPIQYAVPVVKYDRKGYKPRPRQLLLTPSAVVIVEDAK-----VKQRIDYAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ISPEWKQQLQQKAVASEIFKGKKDNYPQSVPRLFISTRLGTEEISPRVLQSLGS-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EW-PQLRLQIIAATALAGRRPYWGQA---RRWVGDYLANSQENSGYEAYNGSIKNIRN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              standard; Protein; 700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ruben SM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2000WO-US14934
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   99US-0138599
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SCI INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Komatsoulis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          558pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           protein SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ij
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         cardiovascular disorder; protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NO::
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1039
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                903
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               897
```

```
Qγ
  밁
                       δÃ
                                                     В
                                                                                                         Db
                                                                                                                                  Ωy
                                                                                                                                                              Дb
                                                                                                                                                                                      Š
                                                                                                                                                                                                                Ъ
                                                                                                                                                                                                                                        δÃ
                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                            ž
                                                                                                                                                                                                                                                                                                                       ф
                                                                                                                                                                                                                                                                                                                                              Q
                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                 QY
                                                                                                                                                                                                                                                                                                                                                                                                                              Ър
                                                                                                                                                                                                                                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ър
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
  667
                                                      607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
                                                                               617
                                                                                                          547
                                                                                                                                   559
                                                                                                                                                              487
                                                                                                                                                                                      501
                                                                                                                                                                                                                427
                                                                                                                                                                                                                                           441
                                                                                                                                                                                                                                                                      372
                                                                                                                                                                                                                                                                                             381
                                                                                                                                                                                                                                                                                                                        313
                                                                                                                                                                                                                                                                                                                                                321
                                                                                                                                                                                                                                                                                                                                                                          253
                                                                                                                                                                                                                                                                                                                                                                                                                              194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    134
                                                                                                                                                                                                                                                                                                                                                                                                    267
                                                                                                                                                                                                                                                                                                                                                                                                                                                         207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    15 IGVGDMVLLEPL-NEETFIDNLKKRFDHNEIYTYIGSVVISVNPYRSLPIYSPEKVEDYR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            27 VGVQDFVLLENFTSEAAFIENLRRFRENLIYTYIGPVLVSVNPYRDLQIYSRQHMERYR
                                                             RFDEVLIRHQVKYLGLMENLRVRRAGFAYRRKYEAFLQRYKSLCPETWPMWAGRPQDGVA
VLFNELEIPVEEHSFGRSKIFIRNPRTLFQLED
                       VLVRHLGYKPEEYKMGRTKIFIRFPKTLFATED
                                              IFNESLVCHQIRYLGLLENVRVRRAGYAFRQAYEPCLERYKMLCKQTWPHWKGPARSGVE
                                                                                                  DHSLIKSLFPEGNPAKVNLKRPPTAGSQFKASVATLMRNLQTKNPNYIRCIKPNDKKAAH
                                                                                                                           MNPIMAQCFDKSELS--DKKRPETVATQFKMSLLQLVEILRSKEPAYIRCIKPNDAKQPG
                                                                                                                                                     HQHFESRMSKCSRFLNDTTLPHSCFRIQHYAGKVLYQVEGFVDKNNDLLYRDLSQAMWKA
                                                                                                                                                                                                                                                                             SLASKDAESPSWRSTTVLGLLDIYGFEVFQHNSFEQFCINYCNEKLQQLF1ELTLKSEQE
                                                                                                                                                                                                                                                                                                                RPASVK-VVLERAFSFRTVEAKREKVSTTLNVAQAYYARDALAKNLYSRLFSWLVNRINE
                                                                                                                                                                        HPHFLTH--KLADQKTRKSLDRGEFRLLHYAGEVTYSVTGFLDKNNDLLFRNLKETMCSS
                                                                                                                                                                                                         EYIREDIEWTHIDYFNNAIICDLIENNTNGILAMLDEECLRPGTVTDETFLEKLNQVCAT
                                                                                                                                                                                                                          EYEAEGIAWEPVQYFNNKIICDLVEEKFKGIISILDEECLRPGEATDLTFLEKLEDTVKP
                                                                                                                                                                                                                                                             SIKAQTKVRKK-----VMGVLDIYGFEIFEDNSFEQFIINYCNEKLQQIFIELTLKEEQE
                                                                                                                                                                                                                                                                                                                                         RLLGVEGTTLREALTHRKIIAKGEELLSPLNLEQAAYARDALAKAVYSRTFTWLVRKINR
                                                                                                                                                                                                                                                                                                                                                                   TVRNAMQIVGFLDHEAEAVLEVVAAVLKLGNIEFKPESRVNGLDESKIKDKIELNEKFAS
                                                                                                                                                                                                                                                                                                                                                                                   RVVKQPRGERNFHVFYQLLSGASEELLYKLKLERDFSRYNYL-SLDSAKVNGVDDAANFR
                                                                                                                                                                                                                                                                                                                                                                                                                                               RVVHQNHGERNFHVFYQLLEGGEEETLRRLGLERNPQSYLYLVKGQCAKVSSINDKSDWK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EVNQVKEQLLQSNPVLEAFGNAKTVRNDNSSRFGKYMDIEFDFKGDPLGGVISNYLLEKS 193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RGGAVRDRLLQSNPVLEAFGNAKTLRNDNSSRFGKYMDVQFDFKGAPVGGHILSYLLEKS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NRNFYELSPHIFALSDEAYRSLRDQDKDQCILITGESGAGKTEASKLVMSYVAAVCGKGA 133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ĀΑ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          33.0%;
51.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            114;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 1782; DI
Pred. No. 9.7e
14; Mismatches
699
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 22;
9.7e-143;
nes 203;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    700;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                               666
                                                                                                                                                        546
                                                                                                                                                                                                           486
                                                                                                                                                                                                                                                               426
                                                                                                                                                                                                                                                                                        440
                                                                                                                                                                                                                                                                                                                                          380
                                                                                                                                                                                                                                                                                                                 371
                                                                                                                                                                                                                                                                                                                                                                     312
                                                                                                                                                                                                                                                                                                                                                                                              320
                                                                                                                                                                                                                                                                                                                                                                                                                       252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               98
```

```
Cytostatic; immunosuppressive; nootropic; neuroprotective; antiviral; antiallergic; hepatotropic; antidiabetic; antiinflammatory; antiulcer; vulnerary; anticonvulsant; antibacterial; antifungal; antiparasitic; cardiant; gene therapy; cancer; immune disorder; cardiovascular disord
                                     neurological
                                                                                                                Human secreted
                                                                                                                                            22-MAR-2001
                                                                                                                                                                                              AAB64616 standard;
                                                                                                                                       (first entry)
                                                                                                                protein
                                                                                                                                                                                            Protein;
                                  infection; human; secreted
                                                                                                               BLAST search
                                                                                                                                                                                             697
                                                                                                                                                                                             ĄΑ
                                                                                                             protein SEQ ID NO: 126,
```

```
The invention relates to the isolation of genes AAF32757-F32803 encoding C the human secreted proteins AAB64549-B64594. The sequence is used as a query sequence for doing BLASTX searches to identify homologous sequences. The genes and proteins are useful for preventing, cameliorating or treating medical conditions, e.g. by protein or gene therapy. The genes are isolated from a range of human tissues disclosed in the specification. The nucleic acids, proteins, antibodies and can treat are useful in the diagnosis, treatment and prevention of: (ant)agonists are useful in the diagnosis, treatment and prevention of: (a) cancer, e.g. breast and ovarian cancer, and other cancers of the adrenal gland, bone, bone marrow, breast, gastrointestinal catery, liver, lung, or urogenital; (b) immune disorders e.g. Addison's disease, allergies, autoimmune haemolytic anaemia, autoimmune thyroiditis, diabetes mellitus, Crohn's disease, multiple sclerosis, cheumatoid arthritis and ulcerative colltis; (c) cardiovascular currently controlled diseases e.g. cerebral anoxia and epilepsy; and (f) controlled diseases e.g. cerebral anoxia and epilepsy; and (f) controlled diseases e.g. cerebral anoxia and epilepsy; and (f) controlled diseases e.g. cerebral anoxia and epilepsy; and (f) controlled diseases e.g. cerebral anoxia and epilepsy; and (f) controlled diseases e.g. cerebral anoxia and epilepsy; and (f) controlled diseases e.g. cerebral anoxia and epilepsy; and (f) controlled diseases e.g. cerebral anoxia and epilepsy; and (f) controlled diseases e.g. cerebral anoxia and epilepsy; and (f) controlled diseases e.g. cerebral anoxia and epilepsy; and (f) controlled diseases e.g. cerebral anoxia and epilepsy care diseases e.g. cerebral anoxia care diseases e
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (HUMA-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Disclosure; Page 519-521; 558pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 2001-032312/04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Rosen CA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      11-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              01-JUN-2000; 2000WO-US14934
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO200077197-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Isolated nucleic acid molecule encoding a human secreted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           infections
                                                                                                                                                                                                                                                                                                                                                                                            134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            nfectious diseases such as viral, bacterial, fungal and parasitic
                         357
                                                                      369
                                                                                                                                                                                                                                                                                                    194
                                                                                                                                                                                                                                                                                                                                                 207
                                                                                                                   297
                                                                                                                                                                                                           253
                                                                                                                                                                                                                                                        267
                                                                                                                                                                                                                                                                                                                                                                                                                                      147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GVSFYEVPPHLFAVADTVYRALRTERRDQAVMISGESGAGKTEATKRLLQFYAETCPAPE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VGVQDFVLLENFTSEAAFIENLRRRFRENLIYTYIGPVLVSVNPYRDLQIYSRQHMERYR 86
                                                                                                                                                                                                                                  EVNQVKEQLLQSNPVLEAFGNAKTVRNDNSSRFGKYMDIEFDFKGDPLGGVISNYLLEKS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     'n
                                               RTFTWLVRKINRSLASKDAESPSWRSTTVLGLLDIYGFEVFQHNSFEQFCINYCNEKLQQ
                                                                                                                                                                                                           TVRNAMQIVGFMDHEAESVLAVVAAVLKLGNIEFKPE-----
                                                                                                                                                                                                                                                                                                RVVKQPRGERNFHVFYQLLSGASEELLNKLKLERDFSRYNYL-SLDSAKVNGVDDAANFR
                                                                                                                                                                                                                                                                                                                          RVVHQNHGERNFHVFYQLLEGGEEETLRRLGLERNPQSYLYLVKGQCAKVSSINDKSDWK 266
                                                                                                                                                                                                                                                                                                                                                                                                               RGGAVRDRLLQSNPVLEAFGNAKTLRNDNSSRFGKYMDVQFDFKGAPVGGHILSYLLEKS 206
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NRNFYELSPHIFALSDEAYRSLRDQDKDQCILITGESGAGKTEASKLVMSYVAAVCGKGA 133
                         RLFSWLVNRINESIKAQTKVRKK-----VMGVLDIYGFEIFEDNSFEQFIINYCNEKLQQ
                                                                                                               ESKIKDKMSXKKFVNCRHXSISSRRAFSFRTVEPTEKVSTTLNVAQAYYARDALAKNLYS
                                                                                                                                                         GTTLREALTHRKI ------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        IGVGDMVLLEPL-NEETFINNLKKRFDHSEIYTYIGSVVISVNPYRSLPIYSPEKVEEYR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               HUMAN GENOME SCI INC
ROSEN C A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   preventing, treating or ameliorating
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ruben SM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              697
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative 118; Mismatches 190; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ĀΑ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9905-0138599
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       32.8%; Score 1770.5; DB 2 49.9%; Pred. No. 9.2e-142;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Komatsoulis GA;
                                                                                                                                      -----IAKGEELLSPLNLEQAAYARDALAKAVYS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   man secreted protein a medical condition
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 697;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   and /
                                                                                                                                                                                                        -SRVNGLD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  45;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ı s
                         411
                                                                      428
                                                                                                                                                           368
                                                                                                                                                                                                                                                     326
                                                                                                                                                                                                                                                                                                252
                                                                                                                                                                                                                                                                                                                                                                                         193
                                                                                                               356
                                                                                                                                                                                                        296
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Qy
δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ър
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Dр
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δÃ
                                     24-FBB-2000
02-MAR 2000
16-MAR-2000
17-MAR-2000
19-MAY-2000
07-JUN-2000
28-JUN-2000
30-JUN-2000
07-JUL-2000
07-JUL-2000
11-JUL-2000
11-AUG-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ligase; hyperproliferative disorder; immunodeficiency disorder; autoimmune disorder; neurological disorder; metabolic disorder; inflammatory disorder; cardiovascular disorder; reproductive di
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAU23125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         nephrotropic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              blood-related disorder; infectious disorder; cytostatic; anti arthritic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human; oxidoreductase enzyme; transferase; hydrolase; lyase; isomerase;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Novel human enzyme
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                17-DEC-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           652
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                592
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             605
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          532
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      472
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                489
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             412
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PHWKGPARSGVEVLFNELEIPVEEYSFGRSKIFIRNPRTLFKLED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TFLEKLEDTVKPHPHFLTH--KLADQKTRKSLDRGEFRLLHYAGEVTYSVTGFLDKNNDL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LFIELTLKSEQEEYEAEGIAWEPVQYFNNKIICDLVEEKFKGIISILDEECLRPGEATDL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PMWAGRPQDGVAVLVRHLGYKPEEYKMGRTKIFIRFPKTLFATED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RCIKPNDAKQPGRFDEVLIRHQVKYLGLMENLRVRRAGFAYRRKYEAFLQRYKSLCPETW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LYRDLSQAMWKASHALIKSLFPEGNPAKINLKRPPTAGSQFKASVATLMKNLQTKNPNYI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LFRNLKETMCSSMNPIMAQCFDKSELS--DKKRPETVATQFKMSLLQLVEILRSKEPAYI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TFLEKLNQVCATHQHFESRMSKCSRFLNDTSLPHSCFRIQHYAGKVLYQVEGFVDKNNDL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             IFIELTLKEEQEEYIREDIEWTHIDYFNNAIICDLIENNTNGILAMLDEECLRPGTVTDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RCIKPNDKKAAHIFNEALVCHQIRYLGLLENVRVRRAGYAFRQAYEPCLERYKMLCKQTW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       standard;
                  2000US-0184664

2000US-018874

2000US-0190076

2000US-0190076

2000US-0190123

2000US-0205515

2000US-020467

2000US-0211647

2000US-0211647

2000US-02116480

2000US-0211487

2000US-0217496

2000US-0217496

2000US-0217496

2000US-0218290

2000US-0218290

2000US-0218290

2000US-0225214

2000US-0225214

2000US-0225214

2000US-0225214

2000US-0225216

2000US-0225216

2000US-0225216

2000US-0225216

2000US-0225216

2000US-0225216

2000US-0225216

2000US-0225216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2000US-0179065
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2001WO-US01239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2000US-0180628
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            anticoagulant.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   polypeptide #211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1026
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AA
```

696

591 604

651 664 546 471 488

531

В Ş

밁 Qy 망 Q Б Qy δÃ

망 Š В QY

Вb

2000US-0226681. 2000US-0226868. 2000US-0227182. 2000US-0225757. 2000US-0225758. 2000US-0225759.

```
The present invention relates to the isolation of novel human enzyme CC polypeptides, and the cDNA (AAS40785-AAS41684) and genomic sequences encoding them. The enzyme polypeptides of the invention may comprise the CC functional classes of oxidoreductases, transferases, hydrolases, lyases, CC isomerases or ligases. The sequences of the invention are useful in the CC diagnosis, treatment, prevention and/or prognosis of a wide range of CC disorders including hyperproliferative disorders (e.g. cancer), CC (e.g. arthritis), neurological disorders (e.g. Alzheimer's disease), CC (e.g. asthma), cardiovascular disorders (e.g. Alzheimer's disorders (e.g. asthma), cardiovascular disorders (e.g. atherosclerosis), CC (e.g. asthma), cardiovascular disorders (e.g. atherosclerosis), CC (e.g. infertility) and infectious disorders (e.g. Influenza). The CC (e.g. infertility) and infectious disorders (e.g. Influenza). The CC (e.g. infertility) and infectious disorders (e.g. Influenza). The CC (e.g. infertility) and infectious disorders (e.g. influenza). The CC (e.g. infertility) and infectious disorders (e.g. influenza) therefore the invention can also be used in gene therapy.
                invention.

Note: The sequence data for this patent did not specification, but was obtained in electronic fo at ftp.wipo.int/pub/published_pct_sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          17-NOV-2000;
01-DEC-2000;
01-DEC-2000;
05-DEC-2000;
05-DEC-2000;
05-DEC-2000;
06-DEC-2000;
06-DEC-2000;
08-DEC-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                          Novel polypeptides and polynucleotides useful for diagnosing, preventing, treating neural, immune system, muscular, reproductive, pulmonary, cardiovascular, renal, proliferative disorders and cancerous
                                                                                                                                                                                                                                                                                                                                                                                     Claim 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 2001-465566/50.
N-PSDB; AAS40995.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  08-NOV-2000

08-NOV-2000

08-NOV-2000

08-NOV-2000

17-NOV-2000

17-NOV-2000
                                                                                                                                                                                                                                                                                                                                                                                                                        diseases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               HUMAN
                                                                                                                                                                                                                                                                                                                                                                                   SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2000US-0249609

2000US-0246613

2000US-0249207

2000US-0249209

2000US-0249210

2000US-0249211

2000US-0249211

2000US-0249213

2000US-0249213

2000US-0249214

2000US-0249214

2000US-0249215

2000US-0249216

2000US-0249218

2000US-02511868

2000US-02511868

2000US-02511989

2000US-02511989

2000US-02511989

2000US-02511989

2000US-02511989

2000US-02511989

2000US-02511989

2000US-02511989

2000US-02511999

2000US-02511999

2000US-02511999

2000US-0254097
                                                                                                                                                                                                                                                                                                                                                                                   ID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GENOME
                                                                                                                                                                                                                                                                                                                                                                              No 1121; 1180pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SCI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SM;
                                    of form part of the printed format directly from WIPO
```

14 - AUG - 2000)
14 - AUG - 2000)
18 - AUG - 2000)
22 - AUG - 2000)
22 - AUG - 2000)
23 - AUG - 2000)
24 - AUG - 2000)
25 - AUG - 2000)
26 - SEP - 2000)
27 - SEP - 2000)
28 - SEP - 2000)
29 - SEP - 2000)
21 - SEP - 2000)
21 - SEP - 2000)
21 - SEP - 2000)
22 - SEP - 2000)
23 - SEP - 2000)
24 - SEP - 2000)
25 - SEP - 2000)
26 - SEP - 2000)
27 - SEP - 2000)
28 - SEP - 2000)
29 - SEP - 2000)
21 - SEP - 2000)
21 - SEP - 2000)
22 - SEP - 2000)
23 - SEP - 2000)
24 - SEP - 2000)
25 - SEP - 2000)
26 - SEP - 2000)
27 - SEP - 2000)
28 - SEP - 2000)
29 - SEP - 2000)
21 - SEP - 2000)
21 - SEP - 2000)
22 - SEP - 2000)
23 - SEP - 2000)
24 - SEP - 2000)
25 - SEP - 2000)
26 - SEP - 2000)
27 - SEP - 2000)
28 - SEP - 2000)
29 - SEP - 2000)
20 - OCT - 2000)
21 - SEP - 2000)
21 - SEP - 2000)
22 - SEP - 2000)
23 - SEP - 2000)
24 - SEP - 2000)
25 - SEP - 2000)
26 - SEP - 2000)
27 - SEP - 2000)
28 - SEP - 2000)
29 - SEP - 2000)
20 - OCT - 2000)
21 - SEP - 2000)
22 - OCT - 2000)
23 - SEP - 2000)
24 - SEP - 2000)
25 - SEP - 2000)
26 - SEP - 2000)
27 - SEP - 2000)
28 - SEP - 2000)
29 - SEP - 2000)
20 - OCT - 2000)
21 - SEP - 2000)
22 - OCT - 2000)
23 - OCT - 2000)
24 - SEP - 2000)
25 - SEP - 2000)
26 - SEP - 2000)
27 - SEP - 2000)
28 - SEP - 2000)
29 - SEP - 2000)
20 - OCT - 2000)
21 - SEP - 2000)
21 - OCT - 2000)
22 - OCT - 2000)
23 - OCT - 2000)
24 - OCT - 2000)
25 - SEP - 2000)
26 - SEP - 2000)
27 - SEP - 2000)
28 - OCT - 2000)
29 - SEP - 2000)
29 - SEP - 2000)
20 - OCT - 2000)
21 - OCT - 2000)
22 - OCT - 2000)
23 - OCT - 2000)
24 - OCT - 2000)
25 - SEP - 2000)
26 - SEP - 2000)
27 - OCT - 2000)
28 - OCT - 2000)
29 - OCT - 2000)
29 - OCT - 2000)
20 - OCT - 2000)
21 - OCT - 2000)
22 - OCT - 2000)
23 - OCT - 2000)
24 - OCT - 2000)
25 - OCT - 2000)
26 - OCT - 2000)
27 - OCT - 2000)
28 - OCT - 2000)
29 - OCT - 2000)
29 - OCT - 2000)
20 - OCT - 2000)
21 - OCT - 2000)
21 - OCT - 2000)
22 - OCT - 2000)
23 - OCT - 2000)
24 - OCT - 2000)
25 - OCT - 2000)
26 - OCT - 2000)
27 - OCT - 2000)
28 - OCT - 2000)
29 - OCT - 2000)
29 - OCT - 2000)
20 - O

2000US -0229343
2000US -0229343
2000US -0229343
2000US -0229343
2000US -0230438
2000US -0231244
2000US -0231244
2000US -0231244
2000US -0231243
2000US -0231268
2000US -023299
2000US -023299
2000US -023299
2000US -0233064
2000US -0233064
2000US -0234274
2000US -0235834
2000US -0236370
2000US -0236370
2000US -0236370
2000US -0237037
2000US -0246374
2000US -0246374
2000US -0246523
2000US -0246523
2000US -0246523
2000US -0246523

Query Match Best Local

Similarity

DB 22;

Length 1026;

22

```
Qy
                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                Q
                                                                                                                                                                                                                                                                                     Ъ
                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                                            망
                                                                                                                                                                                                                                                                                                                                                                                        Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δÃ
 В
                          Q
                                                                    В
                                                                                                    δÃ
                                                                                                                                           망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                           817
                                                                                                                                                                                                                  759
                                                                                                                                                                                                                                                   789
                                                                                                                                                                                                                                                                                       714
                                                                                                                                                                                                                                                                                                                        729
                                                                                                                                                                                                                                                                                                                                                              673
                                                                                                                                                                                                                                                                                                                                                                                               669
                                                                                                                                                                                                                                                                                                                                                                                                                                   613
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            497
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          377
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              206
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   148
                                                                      877
                                                                                                          900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             28
                                                                                                                                                                                                                                                                                                                                                                                GRPQDGVAVLVRHLGYKPEEYKMGRTKIFIRFPKTLFATEDSLEVRRQSLATKIQAAWRG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RKINRSLASKDAESPSWRSTTVLGLLDIYGFEVFQHNSFEQFCINYCNEKLQQLFIELTL 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KYLTRLLGVEGTTLREALTHRKIIAKGEELLSP-LNLEQAAYARDALAKAVYSRTFTWLV 375
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KSDWKVMRKALSVIDFTEDEVEDLLSIVASVLHLGNIHFAADEDSNAQ-----VTTENQL 316
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGA--VRDRLLQSNPVLEAFGNAKTLRNDNSSRFGKYMDVQFDFKGAPVGGHILSYLLEK 205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RELYERPPHLYAVANAAYKAMKHRSRDTCIVISGESGAGKTEASKHIMQYIAAVTNPSQR 136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GVQDFVLLENFTSEAAFIENLRRRFRENLIYTYIGPVLVSVNPYRDLQIYSRQHMERYRG 87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MCSSMNPIMAQCF----DKSELSDKKRPETVATQFKMSLLQLVEILRSKEPAYIRCIKP 609
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          THHRHHLHYTSRQLC--PTDKTMEFGRDFRIKHYAGDVTYSVEGFIDKNRDFLFQDFKRL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KSEQEEYEAEGIAWEPVQYFNNKIICDLVEEKFKGIISILDEECLRPGEATDLTFLEKLE 495
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DHVAELTATPRDLVLRSLLARTVASGGRELIEKGHTAAEASYARDACAKAVYQRLFEWVV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SRVLKQHVGERNFHAFYQLLRGSEDKQLHELHLERNPAVYNFTHQGAGLNMTVHSALDSD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SRVVHQNHGERNFHVFYQLLEGGEEETLRRLGLERNPQSYLYLVKGQCAKV---SSI-ND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AEVERVKDVLLKSTCVLEAFGNARTNRNHNSSRFGKYMDINFDFKGDPIGGHIHSYLLEK 196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VSFYEVPPHLFAVADTVYRALRTERRDQAVMISGESGAGKTEATKRLLQFYAETCPAPER 147
LVVLHARGQDD
                                                                                                                                                                                                                                                  FLDHVRASFLLNLRRQLPRNVLDTSWPTPPPALREASELLRELCMKNMVWKYCRSISPEW 848
                                                                                                                                                                                                                                                                                     ---RARLIPI--IVLLLQKAWRGTLARWR-CRRLRAIYTIMRWFR----RHKVRA----
                                                                                                                                                                                                                                                                                                                                                            GSDKAAVSALLEQHGLQ-GDVAFGHSKLFIRSPRTLVTLEQS------713
                                                                                                                                                                                                                                                                                                                                                                                                                               NEDKVAGKLDENHCRHQVAYLGLLENVRVRRAGFASRQPYSRFLLRYKMTCEYTWPNHLL 672
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LYNSTDPTLRAMWPDGQQDITEVT - - KRPLTAGTLFKNSMVALVENLASKEPFYVRCIKP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DTVKPHPHFLTHKLADQKTRKSLDRG-EFRLLHYAGEVTYSVTGFLDKNNDLLFRNLKET 554
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NRINSVMEPRGRDPRRDGKDTVIGVLDIYGFEVFPVNSFEQFCINYCNEKLQQLFIQLIL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EQSHQAVTEAMRVIGFSPEEVESVHRILAAILHLGNIEFVETEEGGLQKEGLAVAEEALV 316
                                 LFVLHVQREDN 967
                                                                   VLFSSHVRKVNR-FHKIRNRALLLTDQHLYKLDPDRQYRVMRAVPLEAVTGLSVTSGGDQ
                                                                                                                                           MPQIKAKVAAMGALQGLRQDWGCRRAWARDYLSSATDNPTASSLFAQRLKTLRDKDGFGA
                                                                                                                                                                           KQQLQQKAVASEIFKGKKDNY--PQSVPRLFISTRLGTEEISPRVLQSL-----
                                                                                                                                                                                                                  HLAELQRRF -
                                                                                                                                                                                                                                                                                                                      FHWRQKFLRVKRSAICIQSWWRGTLGRRKAAKRKWAAQTIRRLIRGFILRHSPRCPENAF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                NDAKQPGRFDEVLIRHQVKYLGLMENLRVRRAGFAYRRKYEAFLQRYKSLCPETWP-MWA 668
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KQEQEEYEREGITWQSVEYFNNATIVDLVERPHRGILAVLDEACSSAGTITDRIFLQTLD
                                                                                                    IQYAVPVVKYDRKGYKPRPRQLLLTPSAVVIVE---DAKVKQRIDYANLTGISVSSLSDS 956
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                404;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                -- QAARQPPLYGRDLVWPLPPAVLQPFQDTCHALFCRWRARQLVKNIPPSD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            32.2%; Score 1738.5; DB 41.6%; Pred. No. 9e-139; tive 155; Mismatches 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                339;
                                                                                                                                                                             -GSEP 899
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         256
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          554
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      612
```

Ъ Qy

18 28

GVDDMVLLPQIT-EDAIAANLRKRFMDDYIFTYIGSVLISVNPFKQMPYFTDREIDLYQG GVQDFVLLENFTSEAAFIENLRRFRENLIYTYIGPVLVSVNPYRDLQIYSRQHMERYRG Matches 400;

Similarity

31.8%;

Score 1714.5; DB 23; Pred. No. 1.1e-136; Mismatches

304;

Indels 193;

Gaps

23;

76 87 Length

Conservative 152;

```
RESULT 9
AAU97544
                                                      The present invention relates to a new probe comprising or consisting of can immobilised phosphatidic acid (PA) functionalised solid support, or a phosphatidic acid (PA) functionalised solid support The comport, or a phosphatidic acid (PA) functionalised solid support. The probe of the invention is useful in an assay method for identifying cand/or isolating a protein that binds to the probe. The invention is also useful for detecting, measuring, identifying and/or isolating more than come type of phosphatidic acid and/or phosphoinositide binding protein cassay is also useful for detecting, measuring, identifying and/or. The cassay is also useful for detecting, measuring, identifying and/or cassay is also useful for detecting, measuring, identifying and/or the stample, to detect and/or measure the ability of an agent, applied to phosphatidic acid and/or phosphoinositide-binding protein containing test sample, to agonise or antagonise protein-probe binding, and to caponise or antagonise protein-probe binding. The probe is useful for cidentifying an agonist or antagonist of phosphatidic acid/ phosphoinositide containing the protein and/or antagonist. The invention is also useful for candidate important proteins for signal transduction, housekeeping and diagnosis. The probe is useful as an important research tool in fundamental research tool.

The probe is useful as an important research tool in fundamental research tool.
Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Novel probe for use in assay method for detecting, measuring, identifying and/or isolating PA- and/or PIPn-binding protein in a tesample, has immobilised phosphatidyl acid attached to solid support
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAU97544 standard; Protein;
                                                      Sequence .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Disclosure; Page 134; 163pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          N-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Stephens L,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       23-AUG-2000;
15-DEC-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human; phosphoinositide-binding protein; phosphatidyl acid; MYOIF;
phosphatidic acid; signal transduction; housekeeping; myosin-1F.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        13-AUG-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAU97544;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (LIMZ/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (BABR-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        23-AUG-2001; 2001WO-GB03791
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WO200218946-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Human Myosin-1F protein MYO1F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (UYCA-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2002-434908/46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ABK52205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LIM Z.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BABRAHAM INST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   UNIV CAMBRIDGE TECH SERVICES
                                                      1098
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Hawkins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2000GB-0020833.
2000GB-0030637.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (first
                                                      AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PΤ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Holmes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1098
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AB,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LTD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Manifava M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ktistakis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Z,
```

77 88

```
RESULT 10
AAU23128
ID AAU23128 standard; Protein; 909
                                                                                                                                                                                             916 PRPRQLLLTPSAVVIVEDAK------VKQRIDYANLTGISVSSLSDSLFVLHV
                                                                                GGGGTRSVTFSRGFGDLAVLKVGGRTLTV 913
                                                                                                       GGPGRDGIIDFTSGSELLITKAKNGHLAV 1036
                                                                                                                                                  QREDNKQKGDVVLQSDHVIETLTKT---ALSADRVNNININQGSITFA-------
                                                                                                                          -QED-----AADSFLESVFKTEFVSLLCKRFEEATRRPLPLTFSDTLQFRVKKEGW
                                                                                                                                                                           PIKRDLILTPKCVYVIGREKMKKGPEKGQVCEVLKKKVDIQALRGVSLSTRQDDFFIL--
                                                                                                                                                                                                                               EASNILLNKKERRRNSINRNEVGDYLGLEE-RPELRQFLGKKERVDFADSVTKYDRR-FK
                                                                                                                                                                                                                                               VASEIFKGKKDNYPQSVPRLFISTRLGTEEISPRVLQSLG-SEPIQYAVPVVKYDRKGYK 915
                                                                                                                                                                                                                                                                                                        FLLNLRRQLPRNVLDTSWPTPPPALREASELLRELCMKNMVWKYCRSISPEWKQQLQQKA
                                                                                                                                                                                                                                                                                                                                                                                                  RVKRSAICIQSWWRGTLGRRKAAKRKWAAQTIRRLIRGFILRHSPRCPENAFFLDHVRAS
                                                                                                                                                                                                                                                                                                                                                                                 HLLRAVNMEDDQYQMGSTKVFVKNPESLFLLEEVRERKFDGFARTIQKAW------
                                                                                                                                                                                                                                                                                                                                                                                                                                 DWEENRVKHOVEYLGLKENIRVRRAGFAYRROFAKFLORYAILTPETWPRWRGDEROGVO
                                                                                                                                                                                                                                                                                                                                                                                                                                                REDEVLIRHOVKYLGLMENLRVRRAGFAYRKYEAFLQRYKSLCPETWPMWAGRPQDGVA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQAFLRMLFPEKLDGDKKGRPSTAGSKIKKQANDLVATLMRCTPHYIRCIKPNETKHAR
                                                                                                                                                                                                                                                                                                                                         -----RRHVAVRKY-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SMNPIMAOCFDKSELSDKK-RPETVATOFKMSLLOLVEILRSKEPAYIRCIKPNDAKQPG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VKPHPHFLTHKLADQKTRKSLDRGEFRLLHYAGEVTYSVTGFLDKNUDLLFRNLKETMCS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EAEGIAWEPVQYFNNKIICDLVEEKFK--GIISILDEECL---RPGEATDLTFLEKLEDT 497
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -QKPQEEYS-----IGVLDIYGFEIFQKNGFEQECINEVNEKLQQIFIELTLKAEQEEY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SGRLQEKLTSRKMDSRWGGRSESINVTLNVEQAAYTRDALAKGLYARLEDELVEAINRAM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ASKDAESPSWRSTTVLGLLDIYGFEVFQHUSFEQFGINYCNEKLQQLFIELTLKSEQEEY 442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GTTLREALTHRKIIA----KGEELLSPLNLEQAAYARDALAKAVYSRTETWLVRKINRSL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TLSAMQVIGIPPSIQQLVLQLVAGILHLGNISFC--EDGNYARVESVDLLAFPAYLLGID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VVMQNENERNEHTYYQLLEGASQEQRONLGL-MTPDYYYYLNQSDTYQVDGTDDRSDEGE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         VVHQNIGERNFHVFYQLLEGGEEETLRRLGLERNPQSYLYLVKGQCAKVSSINDKSDWKV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGAVRDRLLQSNPVLEAFGNAKTLRNDNSSRFGKYMDVQFDFKGAPVGGHILSYLLEKSR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VQHVKDIILQSNPLLEAFGNAKTVRNNNSSRFGKYFEIQFSRGGEPDGGKISNFLLEKSR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VSFYEVPPHLFAVADTVYRALRTERRDQAVMISGESGAGKTEATKRLLOFYAETCPAPER 147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      -----NSWSAG-FVIHHYAGKVSYDVSGFCERNRDVLFSDLIELMQT
                                                                                                                                                                                                                                                                                      EEMRE----
                    A
                                                                                                                                                     1007
                                                                                                                                                                                                                                                                                                         856
                                                                                                                                                                                                                                                                                                                                                          796
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   534
                                                                                                                                                                                                                                                                                                                                                                                                                                  654
                                                                                                                                                                                                                                                                                                                                                                                 704
                                                                                                                                                                                                                                                                                                                                                                                                           736
                                                                                                                                                                                                                                                                                                                                                                                                                                                            676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     594
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             616
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            136
      14-AUG-2000)
18-AUG-2000)
22-AUG-2000)
22-AUG-2000)
22-AUG-2000)
23-AUG-2000)
23-AUG-2000
23-AUG-2000)
01-SEP-2000
01-SEP-2000)
01-SEP-2000
                                                                                                                                                                                                                                                                                  26-JUL-2000
26-JUL-2000
14-AUG-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      19-MAY-2000;
07-JUN-2000;
28-JUN-2000;
30-JUN-2000;
07-JUL-2000;
07-JUL-2000;
07-JUL-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           11-JUL-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human; oxidoreductase enzyme; transferase; hydrolase; lyase; isomerase; ligase; hyperproliferative disorder; immunodeficiency disorder; luftcoimmune disorder; neurological disorder; metabolic disorder; inflammatory disorder; cardiovascular disorder; reproductive disorder; himanod-related disorder; infectious disorder; cytostatic; anti arthritic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             16-MAR-2000;
17-MAR-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    17-JAN-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              02-AUG-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     L8-APR-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WO200155301-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Novel human enzyme
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    17-DEC-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAU23128;
2000US-0231243
2000US-0231244
2000US-0231244
2000US-0231414
2000US-0231414
2000US-0231414
2000US-0232080
2000US-0232081
                                                                                                                                                  2000US-0229344
2000US-0229343
2000US-0220963
2000US-0224519
2000US-022526
2000US-022526
2000US-022526
2000US-022526
2000US-022526
2000US-0225270
2000US-022547
2000US-022575
2000US-022575
2000US-0225758
2000US-0225758
2000US-0225759
                                                                                    2000US-0230437.
2000US-0230438.
                                                                                                                          2000US-0229345
2000US-0229509
                                                                                                                                                                                                                                                                                                                                                                                                                                                           2000US-0186330
2000US-0188974
2000US-0199076
2000US-0199123
2000US-0205515
2000US-0209467
2000US-0214886
2000US-0215647
2000US-0216647
2000US-0217487
2000US-0217487
                                                                                                               2000US-0229513
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2000US-0184664
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2001WO-US01239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
```

В Ş В Š ₽ á В Ş 밁 Ş DЬ δ рb Š 밁 Ş Вb Š рь Ş В Š В Š 90 Ş д Ş Дb Ş DЬ Š В õ

885

1008

835 963

719 857 714 797

737

595

487 558

VGTHEHF ---

427 443 374 383 314 327 256 268 197 208 137 148

12-SEP-2000; 14-SEP-2000; 14-SEP-2000; 14-SEP-2000;

2000US-0231968. 2000US-0232397. 2000US-0232398. 2000US-0232399.

14-SEP-2000; 14-SEP-2000; 14-SEP-2000; 14-SEP-2000;

2000US-0233064

```
Qy
                                                                                                                                                       Qy
                                                                                                                                                                                          DЪ
                                                                                                                                                                                                                                                                                                                                                                                        δÃ
                                                             B
                                                                                                                            망
                                                                                                                                                                                                                        Qy
                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                                                                       Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     01-DEC-2000)
05-DEC-2000)
05-DEC-2000)
05-DEC-2000)
06-DEC-2000)
08-DEC-2000)
08-DEC-2000)
08-DEC-2000)
08-DEC-2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             functional classes of oxidoreductases, transferases, hydrolases, lyases, isomerases or ligases. The sequences of the invention are useful in the diagnosis, treatment, prevention and/or prognosis of a wide range of disorders including hyperproliferative disorders (e.g. cancer), immunodeficiency disorders (e.g. AIDS) autoimmune disorders (e.g. arthritis), neurological disorders (e.g. Alzheimer's disease), metabolic disorders (e.g. phenylketonuria), inflammatory disorders (e.g. asthma), cardiovascular disorders (e.g. atherosclerosis), blood-related disorders (e.g. haemophilia), reproductive disorders (e.g. infertility) and infectious disorders (e.g. influenza). The polynucleotides of the invention can also be used in gene therapy.
                                                                                                                                                                                                                                                                                                                                                                                                                 Note: The sequence data for this patent did not form specification, but was obtained in electronic format at ftp.wipo.int/pub/published_pct_sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The present invention relates to the isolation of novel human enzyme polypeptides, and the cDNA (AAS40785-AAS41684) and genomic sequences encoding them. The enzyme polypeptides of the invention may comprise the functional classes of exidoreductases, transferases, hydrolases, lyases,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Novel polypeptides and polynucleotides useful for diagnosing, preventing, treating neural, immune system, muscular, reproductive, pulmonary, cardiovascular, renal, proliferative disorders and cancerous
                                                                                                                                                                                                                                                                                                                                                                                    Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Claim 11; SEQ ID No 1124; 1180pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           diseases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           N-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAU22915-AAU23814 represent the novel human enzyme polypeptides
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (HUMA-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LUAGULTOU
                                                               197
                                                                                                                            137
                                                                                                                                                            148
                                                                                                                                                                                            77
                                                                                                                                                                                                                         88
                                                                                                                                                                                                                                                                                         28
                                                                                                                                                                                                                                                         18
                                                                                                                                                                                                                                                                                                                                         Local
                                                                                                                                                                                                                                                                          GVQDFVLLENFTSEAAFIENLRRRFRENLIYTYIGPVLVSVNPYRDLQIYSRQHMERYRG
EQSHQAVTEAMRVIGFSPEEVESVHRILAAILHLGNIEFVETEEGGLQKEGLAVAEEALV
                                                                                                                                          GGA--VRDRLLQSNPVLEAFGNAKTLRNDNSSRFGKYMDVQFDFKGAPVGGHILSYLLEK
                                                                                                                                                                                                         VSFYEVPPHLFAVADTVYRALRTERRDQAVMISGESGAGKTEATKRLLQFYAETCPAPER 147
                                                                                                                                                                                                                                                         GKPDFVLLDQVTME-DFMRNLQLRFEKGRIYTYIGEVLVSVNPYQELPLYGPEAIARYQG
                     KSDWKVMRKALSVIDFTEDEVEDLLSIVASVLHLGNIHFAADEDSNAQ------VTTENQL
                                                           2001-465566/50
                                                                                                                           AEVERVKDVLLKSTCVLEAFGNARTNRNHNSSRFGKYMDINFDFKGDPIGGHIHSYLLEK
                                                                                                                                                                                        RELYERPPHLYAVANAAYKAMKHRSRDTCIVISGESGAGKTEASKHIMQYIAAVTNPSQR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CA,
                                                                                                                                                                                                                                                                                                                       al Similarity
376; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAS40998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HUMAN GENOME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Barash SC,
                                                                                                                                                                                                                                                                                                                                                                                      909 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2000US-0251856.
2000US-0251868
2000US-0251869.
2000US-0251999.
2000US-0251990.
2000US-0254097.
2001US-0259678.
                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2000US-0256719
2000US-0251479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2000US-0251030
2000US-0251988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2000US-0250391
                                                                                                                                                                                                                                                                                                                                       31.2%;
43.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SCI INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ruben SM;
                                                                                                                                                                                                                                                                                                                        133;
                                                                                                                                                                                                                                                                                                                             Score 1685; Db 22,
                                                                                                                                                                                                                                                                                                                       Pred. No. 2.7e
3; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                   ot form part of the printed format directly from WIPO
                                                                                                                                                                                                                                                                                                                                                      Length 909;
                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                        60;
                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   of the
                                                                                                                                                         205
                             316
                                                                                                                            196
                                                                                                                                                                                        136
                                                                                                                                                                                                                                                         76
                                                                                                                                                                                                                                                                                       87
                                                             256
                                                                                           261
```

2000US-0241826 2000US-0244617 2000US-0241809. 2000US-0237038. 2000US-0237039. 2000US-0237040.

2000US-0239937 2000US-0239935 2000US-0237037

2000US-0235836

2000US-0234998.

2000US-0241785.

2000US-0241786. 2000US-0240960. 2000US-0241221.

2000US-0241808 2000US-0241787

114-SEP-2000
21-SEP-2000
21-SEP-2000
25-SEP-2000
26-SEP-2000
27-SEP-2000
29-SEP-2000
29-SEP-2000
29-SEP-2000
29-SEP-2000
20-OCT-2000
21-NOV-2000
21-NOV-2000
20-OCT-2000
21-NOV-2000

2000US-0246476 2000US-0246477

2000US-0246475 2000US-0246474

2000US-0246524 2000US-0246523 2000US-0246478

2000US-0249210. 2000US-0249211. 2000US-0249212. 2000US-0249213. 2000US-0249213. 2000US-0249214.

2000US-0246610. 2000US-0246611

18;

2000US-0246609 2000US-0246528

2000US-0246613. 2000US-0249207.

2000US-0249208

2000US-0249216. 2000US-0249217. 2000US-0249218.

2000US-0249215

2000US-0249244. 2000US-0249245.

```
RESULT 11
ABB97258
ID ABB97
XX Howel
XX Homen
XX Home
PN W0200
XX W0200
XX Home
PN W0200
XX Home
XX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         рь
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           QY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
N-PSDB; ABN32444
                   WPI; 2002-292408/33
                                                                                         Tang YT,
                                                                                                                                                                           11-SEP-2000; 2000US-0659671
                                                                        Xue AJ,
                                                                                                                                   (HYSE-) HYSEQ INC
                                                                                                                                                                                                                          10-SEP-2001; 2001WO-US26015
                                                                                                                                                                                                                                                                                                                                                                                                             Human; antianaemic; vulnerary; antiinflammatory; immunomodu antiinfertility; cerebroprotective; cytostatic; rheumatic; neuroprotective; antiparkinsonian; protein therapy; EST;
                                                                                                                                                                                                                                                                            21-MAR-2002
                                                                                                                                                                                                                                                                                                                      WO200222660-A2.
                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                           expressed sequence tag.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Novel human protein SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ABB97258 standard; Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 27-JUN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ABB97258;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  817
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     714 ---RARLIPI--IVLLLQKAWRGTLARWR-CRRLRAIYTIMRWFR----RHKVRA----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         497
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            377
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MPQIKAKVAAMGALQGLRQDW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KOOLOOKAVASEIFKGKKDNY 869
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FLDHVRASFLLNLRRQLPRNVLDTSWPTPPPALREASELLRELCMKNMVWKYCRSISPEW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HLAELQRRF--QAARQPPLYGRDLVWPLPPAVLQPFQDTCHALFCRWRARQLVKNIPPSD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FHWRQKFLRVKRSAICIQSWWRGTLGRRKAAKRKWAAQTIRRLIRGFILRHSPRCPENAF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GSDKAAVSALLEQHGLQ-GDVAFGHSKLFIRSPRTLVTLEQS-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GRPQDGVAVLVRHLGYKPEEYKMGRTKIFIRFPKTLFATEDSLEVRRQSLATKIQAAWRG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NEDKVAGKLDENHCRHQVAYLGLLENVRVRRAGFASRQPYSRFLLRYKMTCEYTWPNHLL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NDAKQPGRFDEVLIRHQVKYLGLMENLRVRRAGFAYRRKYEAFLQRYKSLCPETWP-MWA
                                                              Yang Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LYNSTDPTLRAMWPDGQQDITEVT--KRPLTAGTLEKNSMVALVENLASKEPFYVRCIKP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MCSSMNPIMAQCF-----DKSELSDKKRPETVATQFKMSLLQLVEILRSKEPAYIRCIKP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        THHRHHLHYTSRQLC--PTDKTMEFGRDFRIKHYAGDVTYSVEGFIDKNRDFLFQDFKRL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KOEGEEYEREGITWOSVEYFNNATIVDLVERPHRGILAVLDEACSSAGTITDRIFLOTLD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KSEQEEYEAEGIAWEPVOYFNNKIICDLYEEKFKGIISILDEEGLRPGEATDLTFLEKLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NRINSVMEPRGRDPRRDGKDTVIGVLDIYGFEVFPVNSFEQFCINYCNEKLQQLFIQLIL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RKINRSLASKDAESPSWRSTTVLGLLDIYGFEVFQHNSFEQFCINYCNEKLQQLFIELTL 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DHVAELTATPRDLVLRSLLARTVASGGRELIEKGHTAAEASYARDACAKAVVQRLFEWVV 376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                KYLTRLLGVEGTTLREALTHRKIIAKGEELLSP-LNLEQAAYARDALAKAVYSRTETWLV 375
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
                                                                Zhou P,
Wehrman
                                                                               Asundi V,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      837
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1089
                                                         Drmanac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A
                                                         Zhang J,
: RT;
                                                                        Zhao
                                                                                                                                                                                                                                                                                                                                                                                                                                                            immunomodulator;
                                                                        QA,
                                                                                                                                                                                                                                                                                                                                                                                                                                    gene therapy;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 609
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 612
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           554
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    495
```

Ъ

```
Q
                                               В
                                                                         Qy
                                                                                                         DЬ
                                                                                                                                 Qy
                                                                                                                                                                Ъ
                                                                                                                                                                                           δÃ
                                                                                                                                                                                                                          B
                                                                                                                                                                                                                                                   QΥ
                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                           Q
                                                                                                                                                                                                                                                                                                                                          дb
                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                             Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                              DЪ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  γΩ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         γO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Local Sin
Matches 378;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local
                  726
                            633 RWRGDEROGVOHLLKAVNMEPDOYOMGSTKVFVKNPESLFLLEEVRERKFDGFARTIOKA
                                                                                                    606 CIKPNDAKQPGREDEVLIRHQVKYLGLMENLRVRRAGFAYRKKYEAFLQRYKSLCPETWP
                                                                                                                                                                                                    465 DOTILLOKLOAAVGTHEHF-----NSWSAG-FVIHHYAGKVSYDVSGFCERNRDV 512
                                                                                                                                                                                                                                                   487
                                                                                                                                                                                                                                                                                405
                                                                                                                                                                                                                                                                                                              432
                                                                                                                                                                                                                                                                                                                                     372 TWLVRKINRSLASKDAESPSWRSTTVLGLLDIYGEEVFQHNSFEQFCINYCNEKLQQLFI 431
                                                                                                                                                                                                                                                                                                                       352 DFLVEAINRAM-QKPQEEYS-----IGVLDIYGFEIFQKNGFEQFCINFVNEKLQQIFI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The present invention provides the protein and coding sequences of 444 (ESTs). They can be used to stimulate cell growth, to regulate e.g. in burn treatment, to regulate the immune system e.g. to treat aplastic anaemia, to help tissue regrowth multiple sclerosis, to regulate activin or inhibin e.g. to treat infertility, to regulate haemostasis or thrombolysis e.g. to treat stroke and cancer, to screen for drugs, to treat inflammatory conditions e.g. rheumatoid arthritis, and to treat nervous system disorders e.g. Parkinson's disease. The present sequence is a protein of the invention.
                                                                                                                                                                                                                                                                                                                                                                                292 LAFPAYLLGIDSGRLQEKLTSRKMDSRWGGRSESINVTLNVEQAAYTRDALAKGLYARLF
                                                                                                                                                                                                                                                                                                                                                                                                                                                             236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          117 GGEPDGGKISNFLLEKSRVVMQNENERNFHIYYQVQGRAGGEGAPPGAQRGGQWEGKHLG 176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               An isolated polynucleotide for treating diseases associated with its encoded polypeptide such as cancer and multiple sclerosis -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Example 2;
WRGFHWRQKFLRVKRSAICIQSWWRGTLGRRKAAKRKWAAQTIRRLIRGFILRHSPRCPE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           70 PYRDLQIYSRQHMERYRGVSFYEVPPHLFAVADTVYRALRTERRDQAVMISGESGAGKTE 129
                                                                                      CIKPNETKRPRDWEENRVKHQVEYLGLKENIRVRRAGFAYRRQFAKFLQRYAILTPETWP
                                                                                                                                                              LFRNLKETMCSSMNPIMAQCFDKSELSDKK-RPETVATOFKMSLLQLVEILRSKEPAYIR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2 PY-----FTDREIDLYQGAAQYENPPHIYALTDNMYRNMLIDCENQCVIISGESGAGKTV
                                                        MWAGRPQDGVAVLVRHLGYKPEEYKMGRTKIFIRFPKTLFATEDSLEVRRQSLATKIQAA
                                                                                                                                             LFSDLIELMQSSDQAFLRMLFPEKLDGDKKGRÞSTAGSKIKKQANDLVATLMRCTÞHYIR
                                                                                                                                                                                                                                                             DLTELEKLEDTVKPHPHFLTHKLADQKTRKSLDRGEERLLHYAGEVTYSVTGFLDKNNDL 546
                                                                                                                                                                                                                                                                                                                                                                                                   LKYLTRLLGVEGTTLREALTHRKIIA----KGEELLSPLNLEQAAVARDALAKAVYSRTF
                                                                                                                                                                                                                                                                                                                                                                                                                                          DGTDDRSDFGETLSAMQVIGISIQQL--VLQLVAGILHLGNISFC--EDGNYARVESVDL
                                                                                                                                                                                                                                                                                                                                                                                                                                                          GHGRADEGSQGLSQASTRCMNMATPSSWLEGASQEQRQNLGL-MTPDYYYYLNQSDTYQV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATKRLLQFYAETCPAPERGGAYRDRLLQSNPVLEAFGNAKTLRNDNSSREGKYMDVQFDF 189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KGAPVGGHILSYLLEKSRVVHQNHGERNFHVFYQL------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAKYIMGYISKYSGGGEKVQHYKDIILQSNPLLEAFGNAKTYRNNNSSREGKYFEIQESR 116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1089 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQ ID NO 526; 509pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      29.0%;
35.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               147;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 1565; DB 23;
Pred. No. 6.3e-124;
7; Mismatches 283;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels 252;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 1089;
                                                        725
                                                                                                                                                                           605
                                                                                                                                                572
                                                                                                                                                                                                                                                                                           486
                                                                                                                                                                                                                                                                                                                         404
                                                                                                                                                                                                                                                                                                                                                                                 351
                                                                                                                                                                                                                                                                                                                                                                                                                                          291
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             56
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    25;
```

```
RESULT 12
ABG20610
ID ABG20
XX ABG20
AC ABG2C
XX ABG2C
XX Honc
DT 13-FI
XX Hood
XX Honc
XX Hon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                       The invention relates to isolated polynucleotide (I) and polypeptide (II) sequences. (I) is useful as hybridisation probes, polymerase chain reaction (PCR) primers, oligomers, and for chromosome and gene mapping, and in recombinant production of (II). The polynucleotides are also used in diagnostics as expressed sequence tags for identifying expressed genes. (I) is useful in gene therapy techniques to restore normal activity of (II) or to treat disease states involving (II). (II) is useful for generating antibodies against it, detecting or quantitating a polypeptide in tissue, as molecular weight markers and as a food supplement. (II) and its binding partners are useful for treating antibodies in the sequence of the sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       biodiversity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               New isolated polynucleotide and encoded polypeptides, useful in diagnostics, forensics, gene mapping, identification of mutations responsible for genetic disorders or other traits and to assess
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                31-MAR-2000;
23-AUG-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           30-MAR-2001; 2001WO-US08631
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              11-OCT-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WO200175067-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human; chromosome mapping; gene mapping; gene therapy; forension food supplement; medical imaging; diagnostic; genetic disorder
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Novel human diagnostic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ABG20610
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ABG20610 standard; Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (HYSE-) HYSEQ INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       13-FEB-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     863
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       815
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               952
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      905
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         846
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          756
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    703
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           693
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TLQFRVKKEGWGGGGTRSVTFSRGFGDLAVLKVGGRTLTV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TRQDDFFIL - - - QED-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SLSDSLFVLHVQREDNKQKGDVVLQSDHVIETLTKT---ALSADRVNNININQGSITFA- 1007
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PVVKYDRKGYKPRPRQLLLTPSAVVIVEDAK-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PEWKQQLQQKAVASEIFKGKKDNYPQSVPRLFISTRLGTEEISPRVLQSLG-SEPIQYAV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SVTKYDRR-FKPIKRDLILTPKCVYVIGREKMKKGPEKGPVCEILKKKLDIQALRGVSLS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAFFLDHVRASFLLNLRRQLPRNVLDTSWPTPPPALREASELLRELCMKNMVWKYCRSIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2001-639362/73
)B; AAS84797.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           W----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RT,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQ
       involving
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2000US-0540217
2000US-0649167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Liu C,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ID No 50969; 103pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGPGRDGIIDFTSGSELLITKAKNGHLAV 1036
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         · EASNILLNKKERRRNSINRNFVGDYLGLEE - RPELRQFLGKKERVDFAD
   aberrant protein expression
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Tang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        protein #20601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          759
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   --AADSFLESVFKTEFVSLLCKRFEEATRRPLPLTFSD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ---RRHVAVRKY---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EEMRE - -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     902
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ---VKQRIDYANLTGISVS
       or biological
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            torensic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         755
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   862
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      814
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              951
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           845
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    707
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           702
```

```
Qy
                                                                                                                                                                                                                                                                                             Вþ
                                                                                                                                                                                                                                                                                                                          ρ
                                                                                                                                                                                                                                                                                                                                                            Вρ
                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                          Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                       ρy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δã
                                밁
                                                           QΥ
                                                                                                밁
                                                                                                                             20
                                                                                                                                                             Дb
                                                                                                                                                                                          Qy
                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The polypeptide and polynucleotide sequences have applications in diagnostics, forensics, gene mapping, identification of mutations responsible for genetic disorders or other traits to assess biodiversity and to produce other types of data and products dependent on DNA and amino acid sequences. ABG00010-ABG30377 represent novel human diagnostic amino acid sequences of the invention.

Note: The sequence data for this patent did not appear in the printed specification, but was obtained in electronic format directly from WIPO at ftp.wipo.int/pub/published_pct_sequences.
                                                                                                                                                                                                                                                                                                                                                             456
 848
                                 999
                                                                788
                                                                                                621
                                                                                                                               728
                                                                                                                                                               588
                                                                                                                                                                                                                                                              809
                                                                                                                                                                                                                                                                                              498
                                                                                                                                                                                                                                                                                                                               553
                                                                                                                                                                                                                                                                                                                                                                                            500
                                                                                                                                                                                                                                                                                                                                                                                                                              396
                                                                                                                                                                                                                                                                                                                                                                                                                                                            440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           206
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KVMRKALSVIDFTEDEVEDLLSIVASVLHLGNIHFAADEDSNAQ-----VTTENQLKYLT 320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      cal Similarity
332; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VSFYEVPPHLFAVADTVYRALRTERRDQAVMISGESGAGKTEATKRLLQFYAETCPAPER 147
                                                                                                                GFHWRQKFLRVKRSAICIQSWWRGTLGRRKAAKRKWAAQTIRRLIRGFILRHSPRCPENA
                                                                                                                                                                                                                                                            KPNDAKQPGRFDEVLIRHQVKYLGLMENLRVRRAGFAYRRKYEAFLQRYKSLCPETWPMW
                                                                                                                                                                                                                                                                                              RMLYNSTDPTLRAMWPDGQQDITEVT--KRPLTAGTLFKNSMVALVENLASKEPFYVRCI
                                                                                                                                                                                                                                                                                                                                                            HHLHYTSRQVPPAVPVPPQWADKTMEFGRDFRIKHYAGD----
                                                                                                                                                                                                                                                                                                                                                                              PHPHFLTHK-----LADQKTRKSLDRG-EFRLLHYAGEVTYSVTGFLDKNNDLLFRNLK 552
                                                                                                                                                                                                                                                                                                                                                                                                                            EEYEREGITWQSVEYFNNATIVDLVERPHRGILAVLDEACSSAGTITDRIFLQTLDMHHR
                                                                                                                                                                                                                                                                                                                                                                                                                                           EEYEAEGIAWEPVQYFNNKIICDLVEEKFKGIISILDEECLRPGEATDLTFLEKLEDTVK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SVMEPRGRDPRRDGKDTVIGVLDIYGFEVFPVNSFEQFCINYCNEKLQQLFIQLILKQEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           {\tt RSLASKDAESPSWRSTTVLGLLDIYGFEVFQHNSFEQFCINYCNEKLQQLFIELTLKSEQ}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ELTATPRDLVLRSLLARTVASGGRELIEKGHTAAEASYARDACAKAVYQRLFEWVVNRIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RLLGVEGTTLREALTHRKIIAKGEELLSP-LNLEQAAYARDALAKAVYSRTFTWLVRKIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            QAVTEAMRVIGFSPEEVESVHRILAAILHLGNIEFVETEEGGLQKEGLAVAEEALVDHVA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SRVLKQHVGERNFHAFYQALD--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AEVERVKDVLLKSTCVLEAFGNARTNRNHNSSRFGKYMDINFDFKGDPIGGHIHSYLLEK 188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGA--VRDRLLQSNPVLEAFGNAKTLRNDNSSRFGKYMDVQFDFKGAPVGGHILSYLLEK 205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RELYERPPHLYAVANAVYKAMKHRSRDTCIVISGESGAGKTEASKHIMQYIAAVTNPSQR 128
WKQQLQQKAVASEIFKGKKDNY 869
                                                                                                                                                               ALKEQHGL-----QGDVAFGHSKLFIRSPRTLVTLEQS----
                                                                                                                                                                                              AGRPQDGVAVLVRHLGYKPEEYKMGRTKIFIRFPKTLFATEDSLEVRRQSLATKIQAAWR
                                                                                                                                                                                                                              KPNEDKVAGKLDENHCRHQVAYLGLLENAAVS--
                                                                                                                                                                                                                                                                                                                           ETMCSSMNPIMAQCF-----DKSELSDKKRPETVATQFKMSLLQLVEILRSKEPAYIRCI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SRVVHQNHGERNFHVFYQLLEGGEEETLRRLGLERNPQSYLYLVKGQCAKVSSINDKSDW
                                                              FFLDHVRASFLLNLRRQLPRNVLDTSWPTPPPALREASELLRELCMKNMVWKYCRSISPE
                                 -HLAELQRRF-
                                                                                               RARLIPI - - IVLLLQKAWRGTLARWR-CRRLRAIYTIMRWFR--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        759
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AA;
                                -QAARQPPLYGRDLVWPLPPAVLQPFQDTCHALFCRWRARQLVKNIPPS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       26.2%;
38.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        122;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 1412.5; DB 22; Pred. No. 3.7e-111;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      -111;
261;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels 147;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 759;
                                                                                                                                                                                                                                                                                                                                                            ----DLK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SDEQSH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           439
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         89
                                                                                                                               787
                                                                                                                                                                                              727
                                                                                                                                                                                                                                                              667
                                                                                                                                                                                                                                                                                              555
                                                                                                                                                                                                                                                                                                                           607
                                                                                                                                                                                                                                                                                                                                                             497
                                                                                                                                                                                                                                                                                                                                                                                                                            455
                                                                                                                                                                                                                                                                                                                                                                                                                                                            499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        87
                                                                847
                                                                                                                                                             620
                                                                                                                                                                                                                              587
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        18;
```

```
ARESULT 13
ARB60369
ID ABB60
AC ABB60
A
                                       Š
                                                                                     Ф
                                                                                                                            ρ
                                                                                                                                                                             Ъ
                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                              ő
                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        useful in developmental biology and in elucidating cell signalling insecticities, therapeutics and pharmaceutical drugs. The invent cell-cell interactions in higher eukaryotes for the development of discloses genomic DNA sequences (ABL16176-ABL30511), expressed DNA (ABB5737-ABB72072).
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The sequence data specification, but
                                                                                     154
                                                                                                                                 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          New isolated nucleic acid genes from Drosophila and interactions -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Venter JC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (PEKE ) PE CORP NY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              23-MAR-2000;
11-JUL-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             23-MAR-2001; 2001WO-US09231
                                                                                                                                                         Drosophila melanogaster.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Drosophila melanogaster polypeptide SEQ
                                                                                                                                                                                                                        59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         pharmaceutical
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ABB60369;
                                                                                                                                                                                                                                                                         35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       26-MAR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ABB60369 standard;
                                                                                                                                                                                                                                                                                               4 RASALGSDGVRVTME-----SALTARDRVGVQDFVLLENFTSEAAFIENLRRRERENLIY 58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1:: | :| :| : ::
723 DMPQIKAKVAAMGALQGLRQDW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ftp.wipo.int/pub/published_pct_sequences
FGKYMDVQFDFKGAPVGGHILSYLLEKSRVVHQNHGERNFHVFYQLLEG--GEEETLRRL
                                                                                            ISGESGAGKTEATKRILQFYAETCPAPERGGAVRDRLIQSNPVLEAFGNAKTLRNDNSSR
                                                                 ISGESGAGKTESTKLILQYLA---AISGKHSWIEQQILEANPILEAFGNAKTIRNDNSSR
                                                                                                                                                                                                TYIGPVLVSVNPYRDLQIYSRQHMERYRGVSFYEVPPHLFAVADTVYRALRTERRDQAVM 118
                                                                                                                                                                                                                                                      RIQVRDDDGDEVWLAPERRIKAMHASSVQGVEDMISLGDL-HEAGILRNLLIRYKENLIY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2001-656860/75
)B; ABL04472.
                                                                                                                                                                                                                                                                                                                                                                                  Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                      2167 AA;
                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQ ID NO 7899; 21pp + Sequence Listing; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Adams M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              developmental biology; cell signalling; insecticide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2000US-191637P
2000US-0614150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ata for this patent did not form part of the printed but was obtained in electronic format directly from
                                                                                                                                                                                                                                                                                                                                                                                25.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ε
                                                                                                                                                                                                                                                                                                                                                       152;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PWD,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    detection reagent for detecting for elucidating cell signalling
                                                                                                                                                                                                                                                                                                                                                                             Score 1362;
Pred. No. 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            744
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2167
                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Myers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EΨ
                                                                                                                                                                                                                                                                                                                                                                           .8e-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ID NO 7899
                                                                                                                                                                                                                                                                                                                                                                                                      DB
                                                                                                                                                                                                                                                                                                                                                                                              Length 2167
                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1000
and c
                                                                                                                                                                                                                                                                                                                                                  46;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  cell-cell
                                                                 210
                                                                                                                                                                                                                                                      93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WIPO
                                                                                                                                                                                                                                                                                                                                                15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ŗ.
```

```
γ
                                                            밁
                                                                                   Q
                                                                                                                  DЪ
                                                                                                                                            Qγ
                                                                                                                                                                           DЬ
                                                                                                                                                                                                    Qy
                                                                                                                                                                                                                                    Дb
                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                            Вb
                                                                                                                                                                                                                                                                                                                      Qy
                                                                                                                                                                                                                                                                                                                                                      DЪ
                                                                                                                                                                                                                                                                                                                                                                              QY
                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                       δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
787 MRLQALIRSRVLSH
                                                                                                                   674
                                                                                                                                              651
                                                                                                                                                                           614
                                                                                                                                                                                                     591
                                                                                                                                                                                                                                   554
                                                                                                                                                                                                                                                                                            503
                                                                                                                                                                                                                                                                                                                                                      443
                                                                                                                                                                                                                                                                                                                                                                                                              388
                                                                                                                                                                                                                                                                                                                                                                                                                                          354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     211
                                                                          SLEVRRQSLATK----IQAAWRGFHWRQKFLRVKRSAICIQSWWRGTLGRRKAAKRKWAA
                                                                                                                           -LEQERDRVLTRKILILQRSIRGWYYRRRFLRLRAAAITVQRFWKGYAQRKRYRNMRVGY
                                                                                                     EFVERYRFLIPGVPPAHRTDCQAATSRICAVVLG--KSDYQLGHTKVFLKDAHDLF----
                                                                                                                                                                                         QLVEILRSKEPAYIRCIKPNDAKQPGREDEVLIRHQVKYLGLMENLRVRRAGFAYRRKYE
                           QTIRRLIRGFILRH
                                                                                                                                                                                                                      YDTRGFLDKNRDTFSPDLLHLVSQSTNKFLRQIFAQDIEMGAETRKRTPTLSTQFRKSLD
                                                                                                                                                                                                                                                  YSVTGFLDKNNDLLFRNLKETMCSSMNPIMAQCFDKS---ELSDKKRPETVATQFKMSLL 590
                                                                                                                                                                                                                                                                               LIDEEARFP-KGTDQTMLAKLHKTHGSHKNYLKPK-SDINT----SFGLNHFAGVVF
                                                                                                                                                                                                                                                                                                          ILDEECLRPGEATDLTFLEKLEDTVKPHPHFLTHKLADQKTRKSLDRGEFRLLHYAGEVT 533
                                                                                                                                                                                                                                                                                                                                                           FEQFCINYCNEKLQQLFIELTLKSEQEEYEAEGIAWEDVQYFNNKIICDLVEEKFKGIIS 473
                                                                                                                                                                                                                                                                                                                                          FEQFCINYANENLQQFFVQHIFKLEQEEYNHEAINWQHIEFVDNQDALDLIAIKQLNIMA
                                                                                                                                                                                                                                                                                                                                                                                                                                                         {\tt NIKYKATVVDNLDATEIPEHINVERVAGLLGLPIQPLIDALTRRTLFAHGETVVSTLSRD}
                                                                                                                                                                                                                                                                                                                                                                                                  QSVDVRDAFVKGIYGRMFVHIVRKINTAIF-----KPRGTSRNAIGVLDIFGFENFDQNS
                                                                                                                                                                                                                                                                                                                                                                                                                         QAAYARDALAKAVYSRTFTWLVRKINRSLASKDAESPSWRSTTVLGLLLDIYGFEVFQHNS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NIHFAA---DEDSNAQVTTENQLKYLTRLLGVEGTTLREALTHRKIIAKGEELLSPLNLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GLERNPOSYLYLVKGQCAKVSSINDKSDWKVMRKALSVIDFTEDEVEDLLSIVASVLHLG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GMAAD---YKYLTGGNSITCEGRDDAAEFSDIRSAMKVLLFSDQEIWEIIKLLAALLHCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FGKYIDIHFSANGVIEGAKIEQYLLEKSRIVSQNHSERNYHVFYCILAGLSADEKSRLDL
800
                           779
                                                                                                       727
                                                                                                                                                                                                                        613
                                                                                                                                                                                                                                                                                                                                         502
                                                                                                                                                                                                                                                                                                                                                                                                   442
                                                                                                                                                                                                                                                                                                                                                                                                                                                           387
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            27C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    327
```

RESULT 14 AAB42651

AAB42651 standard; Protein; 512

(first entry)

ORF2415 polypeptide sequence SEQ ID NO:4830.

immunostimulant; thrombolytic; coagulant; vasotropic; antidiabetic; hypotensive; dermatological; immunosuppressant; cardiant hypotensive; dermatological; immunosuppressave; antiinflammatory; antiviral; antibacterial; antimunosuppressive; antiinflammatory; antianaemic; gene therapy; cancer; proliferative disorder; hypottension neurodegenerative disorder; osteoarthritis; graft vs host disease; cholesterol ester storage; systemic lipus erythematosus; infection; severe combined immunodeficiency; malaria; autoimmune disorder; asthma; bone damage; cartilage damage; antiinflammatory disease; coagulatics. Human; open reading frame; ORFX; detection; vulnerary; antipsoriatic; antiparkinsonian; anticonvulsant; osteopathic; antiarthritic; cytostatic; hepatotropic; nootropic; neuroprotective; immunosuppressant; cardiant;

Homo sapiens

05-OCT-2000

```
δ
                                                                          B
                                                                                                            Ş
                                                                                                                                                         Вp
                                                                                                                                                                                         20
                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                               ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 nucleic acids can be used to express ORFX proteins in gene therapy vectors. The proteins and nucleic acids may be used to treat cancers, proliferative disorders and nucleic acids may be used to treat cancers, proliferative disorders, neurodegenerative disorders, osteoarthritis, graft vs host disease, cardiovascular disease, diabetes mellitus, hypertension, hypothyroidism, cholesterol ester storage, systemic lupu erythematosus, severe combined immunodeficiency (SCID), AIDS, viral, bacterial or fungal infection, malaria, autoimmune disorders, asthma, allergies, aplastic anaemia, burns, wounds, bone and cartilage damage, nocturnal haemoglobinuria, antiinflammatory disease; to enhance coagulation; to inhibit thrombosis; and as a contraceptive.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    antipsoriatic; antiparkinsonian; nootropic; neuroprotective; osteopathic; anticonvulsant; antiarthritic; immunosuppressant; immunostimulant; cardiant; thrombolytic; coagulant; vasotropic; antidiabetic; hypotensive; dermatclogical; immunosuppressive; antidiabetic; hypotensive; dermatclogical; immunosuppressive;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       antithyroid; and antianaemic. The sequences can be used for determining the presence of or predisposition to, or preventing or treating pathological conditions associated with an OREX-associated disorder. The
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAC74446 to AAC77606 encode the proteins given in AAB40237 to AAB43397, which represent the human ORFX open reading frames 1 to 3161. The ORFX sequences have activities such as: cytostatic; hepatotropic; vulnerary;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Novel nucleic acids and peptides derived from open reading useful for treating e.g. cancers, proliferative disorders, neurodegenerative disorders and cardiovascular disease -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               31-MAR-1999; 99US-0127607
02-APR-1999; 99US-0127636
05-APR-1999; 99US-0127728
30-MAR-2000; 2000US-0540763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Claim 11; Page 4015-4016; 5507pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       antiinflammatory; antibacterial; antiviral; antifungal;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Shimkets
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (CURA-) CURAGEN CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     31-MAR-2000;
                                                                                                                                                             194
                                                                                                                                                                                                    207
                                                                                                                                                                                                                                               134
                                                                                                                                                                                                                                                                                     147
                                                                                                                                                                                                                                                                                                                                  74
                                                                                                                                                                                                                                                                                                                                                                      87
                                                                                                                                                                                                                                                                                                                                                                                                                 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                     27 VGVQDFVLLENFTSEAAFIENLRRRFRENLIYTYIGPVLVSVNPYRDLQIYSRQHMERYR 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2000-602362/57
TGIDQSVLERAFSFRTVEAKQEKVSTTLNVAQAYYARDALAKNLYSRLFSWLVNRINESI
                                    LGVEGTTLREALTHRKIIAKGEELLSPLNLEQAAYARDALAKAVYSRTFTWLVRKINRSL
                                                                            TVRNAMQIVGFMDHEAESVLAVVAAVLKLGNIEFKPESRVNGLDESKIKDKNELKEICEL
                                                                                                    VMRKALSVIDFTEDEVEDLLSIVASVLHLGNIHFAADEDSN----AQVTTENQLKYLTRL 322
                                                                                                                                                           RVVKQPRGERNFHVFYQLLSGASEELLNKLKLERDFSRYNYL-SLDSAKVNGVDDAANFR
                                                                                                                                                                                 RVVHQNHGERNFHVFYQLLEGGEEETLRRLGLERNPQSYLYLVKGQCAKVSSINDKSDWK
                                                                                                                                                                                                                                            EVNQVKEQLLQSNPVLEAFGNAKTVRNDNSSRFGKYMDIEFDFKGDPLGGVISNYLLEKS
                                                                                                                                                                                                                                                             RGGAVRDRLLQSNPVLEAFGNAKTLRNDNSSRFGKYMDVQFDFKGAPVGGHILSYLLEKS 206
                                                                                                                                                                                                                                                                                                                           NRNFYELSPHIFALSDEAYRSLRDQDKDQCILITGESGAGKTEASKLVMSYVAAVCGKGA 133
                                                                                                                                                                                                                                                                                                                                                                  GVSFYEVPPHLFAVADTVYRALRTERRDQAVMISGESGAGKTEATKRLLQFYAETCPAPE
                                                                                                                                                                                                                                                                                                                                                                                                               IGVGDMVLLEPL-NEETFINNLKKRFDHSEIYTYIGSVVISVNPYRSLPIYSPEKVEEYR 73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                260;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAC76860.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 512 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2000WO-US08621
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Leach M;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   24.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                82; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 1330.5; DB Pred. No. 2e-104;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              129; Indels 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         antirheumatic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       systemic lupus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              trame X,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                  266
                                                                                                                                                                                                                                            193
                                                                            312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4.
```

```
RESULT 15
ABB62828
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δÃ
B
                       Qy
                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      QУ
                                                   Matches
                                                               Query Match
Best Local
                                                                                                                                                                                         capable of detecting 1000 or more genes from Drosophila. The inventuaseful in developmental biology and in elucidating cell signalling cell-cell interactions in higher eukaryotes for the development of insecticides, therapeutics and pharmaceutical drugs. The invention discloses genomic DNA sequences (ABLI6176-ABLJ0511), expressed DNA
                                                                                                                                                                                                                                                                                                                                                                    N-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Drosophila melanogaster polypeptide SEQ ID NO 15276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ABB62828 standard; Protein; 2129
                                                                                                     Sequence
                                                                                                                             at ftp.wipo.int/pub/published_pct_sequences
                                                                                                                                          The sequence data for this patent did not form specification, but was obtained in electronic f
                                                                                                                                                                     sequences (ABL01840-ABL16175) and the (ABB57737-ABB72072).
                                                                                                                                                                                                                                                             The invention relates to an isolated nucleic acid detection reagent
                                                                                                                                                                                                                                                                                      Disclosure; SEQ ID NO 15276; 21pp + Sequence Listing; English
                                                                                                                                                                                                                                                                                                                      New isolated nucleic acid
genes from Drosophila and
interactions -
                                                                                                                                                                                                                                                                                                                                                                                                           Venter
                                                                                                                                                                                                                                                                                                                                                                                                                                                            23-MAR-2000;
11-JUL-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 23-MAR-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WO200171042-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Drosophila melanogaster
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Drosophila;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       26-MAR-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                   (PEKE ) PE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          488
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   503
74
                         29
                                                                                                                                                                                                                                                                                                                                                                     2001-656860/75
DB; ABL06931.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EAEGIAWEPVQYFNNKIICDLVEEKFKGIISILDEECLRPGEATDLTFLEKLEDTVKPHP 502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HF 489
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          IREDIEWTHIDYFNNAIICDLIENNTNGILAMLDEECLRPGTVTDETFLEKLNQVCATHQ 487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ASKDAESPSWRSTTVLGLLDIYGFEVFQHNSFEQFCINYCNEKLQQLFIELTLKSEQEEY
VEDMITLGDL-QEYTILRNLQNRYAKQLIYTYTGSMLVAINPYQILPIYTNREIQLYRNK 132
                        VQDFVLLENFTSEAAFIENLRRRFRENLIYTYIGPVLVSVNPYRDLQIYSRQHMERYRGV 88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ΗF
                                                                                                                                                                                                                                                                                                                                                                                                           JC,
                                                               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   504
                                                                                                                                                                                                                                                                                                                                                                                                                                   CORP NY.
                                                                                                     2129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   developmental biology; cell signalling; insecticide;
                                                                                                                                                                                                                                                                                                                                                                                                         Adams M,
                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                            2000US-191637P
2000US-0614150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2001WO-US09231
                                                                                                     AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VMGVLDIYGFEIFEDNSFEQFIINYCNEKLQQIFIELTLKEEQEEY
                                                           24.6%;
                                                                                                                                                                                                                                                                                                                                                                                                           Ŀ
                                                                                                                                                                                                                                                                                                                                                                                                           PWD,
                                                   165;
                                                                                                                                                                                                                                                                                                                            detection reagent for detecting 1000 for elucidating cell signalling and c
                                                            Score 1328;
Pred. No. 3
                                                                                                                                                                                                                                                                                                                                                                                                         Myers
                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                           EW
                                                                                                                                                                               encoded proteins
                                                               3e-103
                                                                          DB 22;
                                                   331;
                                                                                                                                          format directly from
                                                                                                                                                    part of the printed
                                                   Indels 122;
                                                                          Length
                                                                           2129
                                                                                                                                                                                                                                                  invention
                                                                                                                                                                                                                                                                                                                               cell-cell
                                                                                                                                                                                                                                                                                                                                           or more
                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               427
                                                                                                                                           WIPO
                                                                                                                                                                                                                                                  S.
```

89

SFYEVPPHLFAVADTVYRALRTERRDQAVMISGESGAGKTEATKRLLQFYAETCPAPERG 148

```
Вp
     밁
                     Ş
                                                            Š
                                                                              d.
                                                                                                  Ş
                                                                                                                          g
                                                                                                                                         δÃ
                                                                                                                                                                Вb
                                                                                                                                                                                  Ş
                                                                                                                                                                                                       Вþ
                                                                                                                                                                                                                         Q
                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                      D
                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                               Ŷ
                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            망
                                                                                                                                                                                                   535
                                           863
                                                                                  819
                                                                                                     771
                                                                                                                          759
                                                                                                                                             728
                                                                                                                                                                706
                                                                                                                                                                                     678
                                                                                                                                                                                                                                          591 NKYLVDIFPHEMPMDTAKKOP-TLCVKFRNSLDMLMRTLSQAHPVFIRCIKPNEVKEPKN 649
                                                                                                                                                                                                                                                                    560
                                                                                                                                                                                                                                                                                                            505
                                                                                                                                                                                                                                                                                                                               485
                                                                                                                                                                                                                                                                                                                                      445 EGIAWEPVQYENNKIICDLVEEKFKGIISILDEECLRPGEATDLTELEKLEDTVKPHPHF 504
                                                                                                                                                                                                                                                                                                                                                                370 IPISALNAALTORTIFVHGEHVTTSLSKEAAIEGRDAFVKSLYDGIFVRIVRRINETI-N
                                                                                                                                                                                                                                                                                                                                                                                                                                               325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     209 VHQNHGERNFHVFYQLLEGGEEETLRRLGL-ERNPQSYLYLVKGQCAKVSSINDKSDWKV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     190
                                                                                                                                                                                                                                                                                  EAAARNALAMAAVQQKRRTKPVKQEAPKAPTLQARNSLPPPPTTLIV 942
                  EEISPRVLQSLGSEPIQYAVPVVKYDRKGYKPRPRQLLLTPSAVVIV 931
                                     EELLR-----EREQREQQEKRLQEEQRLKA
                                                        SELLRELCMKNMVWKYCRSISPEWKQQLQQKAVASEIFKGKKDNYPQSVPRLFISTRLGT 884
                                                                                              -----LIRGFILRHSPRCPENAFFLDHVRASFLLNLRRQLPRNVLDTSWPTPPPALREA
                                                                                                                   RVLFRRYMKRYREAIITVQRYWRGRLQRRKYQVMRQGFHRLGACIAAQQLTTKFTMVRCR
                                                                                                                                  LARQICEVALPADSDRQYGKTKLFLR-----DEDDASLELQRSQLMLKSIVTIQRGIR 758
                                                                                                                                                                        LVRHLGY----KPEEYKMGRTKIFIRFPKTLFATED--SLEVRRQSLATK----IQAAWR 727
                                                                                                                                                                                                                                                        NPIMAQCFDKSELSD--KKRPETVATQFKMSLLQLVEILRSKEPAYIRCIKDNDAKQPGR 617
                                                                                                                                                                                                                                                                                                                           EHINWQHIEFQDNQQILDLIGMKPMNLMSLIDEESKFP-KGTDQTLLEKLH------
                                                                                                                                                                                                                                                                                                                                                                                                                     VEGTTLREALTHRKIIAKGEELLSPLNLEQAAYARDALAKAVYSRTFTWLVRKINRSLAS 384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VFQSRDERNYHIEYCMLAGLSTAERERLKLQEQSPSQYHYLAQGGCFTLPGRGDAKDFAD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SWIEQQIIEANPIMEAFGNAKTVRNDNSSRFGKYIEIRFTPQGAIQGARIQQYLLEKSRI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ----VRKDFQKKLLERRKQNQLKKEELLKLAKMKEA
                                                                                                824
                                                                                                                    818
                                                                              862
                                                                                                                                         770
                                                                                                                                                                                                                                                                                                                           534
                                                                                                                                                                                                                                                                                                                                                                                                          428
                                                                                                                                                                                                                                                                                                                                                                                                                                                 369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     324
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     208
```

Search completed: December 9, 2002, 16:44:13 Job time: 73 secs

on:

```
Title:
Perfect score:
Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                          Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Total number
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Post-processing:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Maximum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Minimum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        protein -
                                                                                                                                                                                                                                                                                                                                     Pred. No. is the number of results predicted by chance to have score greater than or equal to the score of the result being pu and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      98
BG
                                                                                         1191
1146
1103
11018
160
160
160
160
160
160
122.5
123.5
122.5
122.5
                                                                                                                                                                                                                                                                                    Score
                                                                                                                                                                                                                                                                                                                                                                                                                                          ..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       protein search, using
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-09-893-371-1
5398
1 MRYRASALGSDGVR
                                                                                                                                                                                                                                                                                                                                                                              Issued_Patents_AA:*
1: /cgn2_6/ptodata/1,
2: /ggn2_6/ptodata/1,
3: /cgn2_6/ptodata/1,
4: /cgn2_6/ptodata/1,
5: /cgn2_6/ptodata/1,
6: /cgn2_6/ptodata/1,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   length: 0
length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BLOSUM62
Gapop 10.0 ,
                                                                                                                                                                                                                                                                                     Match
                                                                                                                                                                                                                                                                                               Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      262574 seqs, 29422922 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     December
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
  120
222222222222222222333300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MRYRASALGSDGVRVTMESA.....LITKAKNGHLAVVAPRLNSR 1044
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Copyright
                                                                                                                                                                                                                                                                                                                                                                            /cgn2_6/ptodata/1/iaa/5A_COMB.pep:*
/cgn2_6/ptodata/1/iaa/5B_COMB.pep:*
/cgn2_6/ptodata/1/iaa/6A_COMB.pep:*
/cgn2_6/ptodata/1/iaa/6B_COMB.pep:*
/cgn2_6/ptodata/1/iaa/B_COMB.pep:*
/cgn2_6/ptodata/1/iaa/backfiles1.pep:*
                                                                                                                                                                                                                                                                                     Length
  ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GenCore version 5.1.3 (c) 1993 - 2002 Compugen Ltd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gapext 0.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2002, 16:44:21; Search time 26 Seconds (without alignments)
1181.443 Million cell updates/sec
                                                                                                                                                                                                                                                                                     DΒ
                                                                                                                                        US-09-310-187A-1
US-09-147-404-1
US-09-172-422-1
US-08-38-105-3
US-09-012-515A-12
US-08-360-144A-12
US-08-471-112A-3
PCT-US95-06722-12
US-08-473-4-010-3945
US-09-134-0010-3762
PCT-US93-03077-1
         US-09-356-952-2
US-08-290-7310-2
US-08-290-7310-2
US-08-290-7313-5
US-09-438-833-5
US-09-438-833-1-6
US-08-785-241-6
US-08-785-241-6
US-08-185-213-2
US-08-185-217-2
US-09-235-217-2
US-09-235-217-2
US-09-236-213-2
US-09-236-10251-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ¥
                                                                                                                                                                                                                                                                                                                    SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        mode1
                                                                                                                                                                                                                                                                                    Description
                                                Sequence
                                                                                                                                                                     Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
         Sequence
                     Sequence
                             Sequence
                                         Sequence
                                                                                                                                                                                                                                                       Sequence
                                                                                                                                                                                                                                                                 Sequence
  Sequence
                                                                                                                                                                                                                                                                                                                                               printed
11. Appli
11. Appli
12. Appli
12. Appli
12. Appli
12. Appli
12. Appli
12. Appli
13. Appli
14. Appli
15. Appli
16. Appli
17. Appli
18. Appli
19. Appli
                              В
                                               Qγ
                                                                    Ър
                                                                                    QΥ
                                                                                                           В
                                                                                                                            Ωy
                                                                                                                                                   Ъ
                                                                                                                                                                  Qy
                                                                                                                                                                                           Ър
                                                                                                                                                                                                            Qy
                                                                                                                                                                                                                                   Вb
                                                                                                                                                                                                                                                     Qγ
                                                                                                                                                                                                                                                                                                                   US-09-310-187A-1
                                                                                                                                                                                                                                                                                                                          SEQ ID NO 1
LENGTH: 1939
TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                    Best
```

Result No.

167

110 107

Local Similarity nes 281; Conserv

22.1%; Score 1191; DB 4; illarity 35.6%; Pred. No. 5.3e-104; Conservative 142; Mismatches 303;

Length 1939;

64;

Gaps

18;

4 RASALGSDGVRVTME-----SALTARDRV-----GVQDFVLLENFTSEAAFIENLR 49

KAKILSREGGKVIAETENGKTVTVKEDQVLQQNPPKFDKIQDMAML-TFLHEPAVLFNLK 106

48

227

286

220

345

280

FYQLLEGGEEETLRRLGLERNPQSYLYLVKGQCAKVSSINDKSDWKVMRKALSVIDFTED

TERRDQAVMISGESGAGKTEATKRLLQFYAETCPAPERG------GAVRDRLLQSNP 160

RRFRENLIYTYIGPVLVSVNPYRDLQIYSRQHMERYRGVSFYEVPPHLFAVADTVYRALR 109 ERYAAWMIYTYSGLFCVTVNPYKWLPVYNAEVVAAYRGKKRSEAPPHIFSISDNAYQYML

166

161

340

IAKGEELLSPLNLEQAAYARDALAKAVYSRTFTWLVRKINRSLASKDAESPSWRSTTVLG EKAGVYKLTGAIMHYGNMKFKQKQREEQAEPDGTEDADKSAYLMGLNSADLLKGLCHPRV 405 EVEDLLSIVASVLHLGNIHFAADE-DSNAQVTTENQLKYLTRLLGVEGTTLREALTHRKI 339 FYQILSNKKPELLDMLLVTNNPYDYAFVSQGE-VSVASIDDSEELMATDSAFDVLGFTSE

--

28 120.5 29 120.5 30 12.5 31 117.5 31 115.3 31 115.3 31 113.3 34 111.5 35 111.5	2.111	874 874 2154 2154 1151 1200 1151 810 1181 1066	888888884844	US-08-804-439A-15 US-08-720-229-15 US-08-841-349-4 US-09-134-001C-3242 US-08-840-006-5 US-08-840-006-6 US-08-848-940-2 US-08-488-940-2 US-09-541-782-8 US-09-723-820-8	15, App 15, App 15, App 15, App 3242, App 3242, App 5, App 6, App 2, App 10, App 10, App
5 110 100 111 111 111 111 111 111 111 111		1066 11194 787 1786 805 805 805 805	25484484	US-09-723-820-8 US-09-723-820-8 US-08-488-940-1 US-08-574-763-2 US-08-973-462-8 US-08-915-213-4 US-08-915-213-4 US-08-915-217-4 PCT-US96-10251-4 US-08-583-276-19	8, Appl 1, Appl 2, Appl 2, Appl 8, Appl 4, Appl 4, Appl 4, Appl 4, Appl 19, App
RESULT 1 JS-09-310-187A-1 Sequence 1, Applicat Sequence 1, Applicat Sequence 1, Applicat Patent NO. 6358751 GENERAL INFORMATION: APPLICANT: Beniche APPLICANT: Fedosey TITLE OF INVENTION: TITLE OF INVENTION: TITLE OF INVENTION: FILE REFERENCE: UC CURRENT APPLICATION CURRENT APPLICATION CURRENT FILING DATE NUMBER OF SEQ ID NO SOFTWARE: FastSEQ SEQ ID NO 1 LENGTH: 1939 TYPE: PRT	87A-1 1, Applicatio 6358751 NFORMATION: "I BENICHOU: "I FEDGESYEV INVENTION: INVENTION: INVENTION: INVENTION: ERENCE: UCSE APPLICATION N FILING DATE: FILING DATE: FISEQ ID NOS: FISEQ TO NOS: FISEQ T	or or	093 ees ven ven Re	ALIGNMENTS 37A of Autoantigens in tion 9/310,187A ersion 4.0	Cardiac

```
PEATURE:

NAME/KEY: MOD_RES

LOCATION: (26)

OTHER INFORMATION: "Xaa" represents Ala or Val

NAME/KEY: MOD_RES

LOCATION: (59)

OTHER INFORMATION: "Xaa" represents Val or Ile

NAME/KEY: MOD_RES

LOCATION: (143)

OTHER INFORMATION: "Xaa" represents Arg or Gln

NAME/KEY: MOD_RES

LOCATION: (249)

OTHER INFORMATION: "Xaa" represents Arg or Gln

NAME/KEY: MOD_RES

LOCATION: (256)

OTHER INFORMATION: "Xaa" represents Arg or Gln

NAME/KEY: MOD_RES

LOCATION: (403)

OTHER INFORMATION: "Xaa" represents Gly or Glu

NAME/KEY: MOD_RES

LOCATION: (403)

OTHER INFORMATION: "Xaa" represents Arg, Gln, Leu

NAME/KEY: MOD_RES

LOCATION: (403)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 2
US-09-147-404-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   β
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOFTWARE: Pate
SOFTWARE: Pate
SEQ ID NO 1
FENGTH: 1120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 1, Application US/09147404 Patent No. 6326163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE OF INVENTION: A METHOD FOR THE DIRECT DIAGNOSTIC DETECTION OF TITLE OF INVENTION: GENETICALLY CAUSED PATHOGENIC POINT MUTATIONS FILE REFERENCE: 10496/P63231US0
CURRENT APPLICATION NUMBER: US/09/147,404
CURRENT FILING DATE: 1999-04-06
NUMBER OF SEQ ID NOS: 3
SOFTWARE: Patentin Ver. 2.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            608
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          681
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    692 MHQLRCNGVLEGIRICRKGFPNRILYGDFRQRYRILNPVAIP--EGQFIDSRKGTEKLLS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            632 DSGKSKGGKKKGSSFQTVSALHRENLNKLMTNLRTTHPHFVRCIIPNERKAPGVMDNPLV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            739 KRSAICIOSW 748
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     750
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   624
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            575
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     572 GKQEAHFSLIHYAGTVDYNILGWLEKNKDPLNETVVALYQKSSLKLMATLFSSYATADTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               517 SLDRGEFRLLHYAGEVTYSVTGFLDKNNDLLFRNLKETMCSSMNPIMAQCFDKSELSD---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     460 VLDIAGFEIFDENSFEQLCINFTNEKLQQFENHHMEVLEQEEYKKEGIEWTFIDEGMDLQ 519
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              406 KVGNEYVTKGQSVQQVYYSIGALAKAVYEKMENWMVTRINATLETKQPRQ-----YFIG 459
         INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SLDIDHNQYKFGHTKVFFK-AGLLGLLEEMRDERLSRIITRMQAQARGQLMRIEFKKIVE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              HLGYKPEEYKMGRTKIFIRFPKTLFATEDSLEVRRQSLATKIQAAWRGFHWRQKFLRV--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RHQVKYLGLMENLRVRRAGFAYRRKYEAFLQRYKSLCPETWPMWAGR----PQDGVAVLVR 680
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RRDALLVIQW 818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -----KKRP---ETVATQFKMSLLQLVEILRSKEPAYIRCIKPNDAKQPGRFDEVLI 623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LLDIYGFEVFQHNSFEQFCINYCNEKLQQLFIELTLKSEQEEYEAEGIAWEDVQYFNNKI 459
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FORSSMANN, WOLF-GEORG
RAIDA, MANFRED
BRENNER, BERNHARD
NIER, VOLKER
"Xaa" represents Arg or Cys
                                                       represents Arg, Gln, Leu or Trp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             808
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    749
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              691
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       631
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             574
```

Qy	ОУ	Оy	~ ~ ~	Sn ;											٠. ٠.	· · · ·			, ., .				
110 TERRDQAVMISGE:	50 RRERENLIYTYIGPV : : 107 DRYGSWMIYTYSGLF	4 RASALGSDGVRVTME : : 48 KAKIVSREGGKXTAE	Query Match Best Local Similarity Matches 275; Conser	ORMATION:	OTHER INFORMATION: NAME/KEY: MOD_RES	OTHER INFORMATION: NAME/KEY: MOD_RES LOCATION: (935)	OTHER INFORMATION: NAME/KEY: MOD_RES	OTHER INFORMATION: NAME/KEY: MOD_RES LOCATION: (908)	ੂਰ ਹ		OTHER INFORMATION: NAME/KEY: MOD_RES	NAME/KEY: MOD_RES		INFORMATION	LOCATION: (723) OTHER INFORMATION:	OTHER INFORMATION: NAME/KEY: MOD_RES	OTHER INFORMATION: NAME/KEY: MOD_RES LOCATION: (719)	OTHER INFORMATION: NAME/KEY: MOD_RES LOCATION: (716)	OTHER INFORMATION: NAME/KEY: MOD_RES LOCATION: (615)	OTHER INFORMATION: NAME/KEY: MOD_RES LOCATION: (606)	Ó		E/KEY: ATION: ER INFO E/KEY:
SGAGK	LVS : CVI	RVTME : KXTAETEYG	21 34 vativ	"Xaa'	"Xaa'	"Xaa'	"Xaa	"Xaa	"Xaa	"Xaa	"Xaa	Xaa	: >a	υ	"Xaa	"Xaa	"Xaa	"Xaa	"Xaa	"Xaa	"Xaa	"Xaa	"Xaa
TERRDQAVMISGESGAGKTEATKRLLQFYAETCPAPERG	RDLQIYSRQHMERYRGVSFY : : : : KWLPVYTPEVVAAYXGKKRS	SALTARDRVGVODFVLLENFT	.2%; Score 1146; DB 4; L .9%; Pred. No. 4.1e-100; e 140; Mismatches 310;	" represents Glu or Lys	" represents Glu or Lys	" represents Glu or Lys	" represents Leu or Val	" represents Arg or His	" represents Ala or Thr	" represents Asp or Gly	" represents Gly, Arg or Trp	" represents lie or Met	sandar		" represents Arg or Cvs	" represents Arg or Trp	" represents Gly or Arg	ı" represents Lys or Asn	a" represents Val or Met	a" represents Asn or Ser	a" represents Asp or Val	a" represents Gly or Arg	a" represents Phe or Cys
-GAVRDRLLQSNPV 161	EVPPHLFAVADTVYRALR 109	ENFTSEAAFIENLR 49 : : -TFLHEPAVLYNLK 106	Length 1120; Indels 64; Gaps								•												

19;

```
RESULT 3
US-09-172-422-1
                                                                                                                                                                                                                                                                                                                                                                                                                                           Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Вр
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      망
US-09-172-422-1
                                                                                                                                                                                                                                                                                                                              GENERAL
                                                                                                                                                                                                                                                                                                                                            Sequence 1, Application US/09172422A Patent No. 6300485
                                                                SEQ ID NO 1
                                                                                                                                         APPLICANT: Adams, Arwen E.
APPLICANT: Chii, Choi Ying
APPLICANT: Chii, Choi Ying
APPLICANT: Chii, Choi Ying
APPLICANT: Gorman, Susan W.
APPLICANT: Leng, Song
APPLICANT: Sheffield, Val
APPLICANT: Welch, Juliet
TITLE OF INVENTION: MYOSIN IXA AND CYCLIC NUCLEOTIDE GATED
TITLE OF INVENTION: CHANNEL-15 (CNGC-15) POLYNUCLEOTIDES, PO
TITLE OF INVENTION: COMPOSITIONS, METHODS, AND USES THEREOF
TITLE REFERENCE: 200130.442
                                                                                                              CURRENT APPLICATION NUMBER: US/09/172,422A CURRENT FILING DATE: 1998-10-14
                                                                              NUMBER OF SEQ ID NOS:
SOFTWARE: FastSEQ for
           LENGTH: 2548
TYPE: PRT
ORGANISM: Homo sapien
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          692
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           632
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           568
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           572
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          518
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          520
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         460
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       406
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     162
                                                                                                                                                                                                                                                                                                                                                                                                                                           808
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           740
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          750
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          626
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LDIYGFEVFOHNSFEOFCINYCNEKLOOLFIELTLKSEQEEYEAEGIAWEPVQYFNNKII 460
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         QVKYLGLMENLRVRRAGFAYRRKYEAFLQRYKSLCPETWPMWAGRPQDG---VAVLVRHL 682
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AKGEELLSPLNLEQAAYARDALAKAVYSRTFTWLVRKINRSLASKDAESPSWRSTTVLGL 400
                                                                                                                                                                                                                                                                                                                              INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                           RDSLLVIQW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RSAICIQSW 748
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DIDHNQYKFGHTKVF--FKAGLLGLLEEMRXERLSRIITRIQAQSRGVLXRMEYKKLLER 807
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GYKPEEYKMGRTKIFIRFPKTLFATEDSLEVRRQS-LATKIQAAWRGFHWRQKFLRV--K 739
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        QLRCNGVLEGIRICRKGFPNRILYXDFXQRYXILNPAA--IXEGQFXDSRKXAEKLLSSL 749
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DKSELSDKKRP--ETVATQFKMSLLQLVEILRSKEPAYIRCIKPNDAKQPGRFDEVLIRH 625
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KPEAHFSLIHYAXIVXYNIIGWLQKNKDPLXETVXGLYQKSSLXLLSTLFANYAGADAPI 631
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VGNEYVTKGQNVQQVIYATGALAKAVYERMFNWMVTRINATLETKQP-----XQYFIGV 459
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KNSMYKLTGAIMHFGNMKFKLKQREEQAEPDGTEEADKSAYLMGLNSADLLKGLCHPXVK 405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VEDLLSIVASVLHLGNIHFAADE-DSNAQVTTENQLKYLTRLLGVEGTTLREALTHRKII 340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LEAFGNAKTLRNDNSSRFGKYMDVQFDFKGAPVGGHTLSYLLEKSRVVHQNHGERNFHVF 221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EKGKGKAKKGSSFQTVSALHRENLNKLMTNLRSTHPHFVRCIIPNETKSPGVMDNPLVMH 691
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     YQILSNKKPELLDMLLITNNPYDYAFISQGE-TTVASIDDAEELMATDNAFDVLGFTSEE 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   YQLLEGGEEETLRRLGLERNPQSYLYLVKGQCAKVSSINDKSDWKVMRKALSVIDFTEDE 281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TDRENQSILITGESGAGKTVNTKRVIQYFAVIAAIGDRSKKDQSPGKGTLEDQIIQANPA
                                                                                                                                                                                                                                                                                                                                                                                                                                           816
                                                                               for
                                                                               Windows Version 3.0
                                                                                                                                                                              POLYPEPTIDES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      226
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        567
```

```
В
                                                                                                 Š
                                                                                                                                  В
                                                                                                                                                          Ş
                                                                                                                                                                                                                                                    US-08-938-105-3
                                                                                                                                                                                                                                                                                           INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 1886 amino acids
TYPE: amino acids
                                                                                                                                                                                           Matches
                                                                                                                                                                                                             Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 4
US-08-938-105-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               덩
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                            CLASSIFICATION:
ATTORNEY/AGENT INFORMATION:
NAME: Crook, Wannell M.
REGISTRATION NUMBER: 31,071
REFERENCE/DOCKET NUMBER: 3995
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ABERAL IMFORMATION:
GENERAL IMFORMATION:
APPLICANT: Leinwand, Leslie A.
APPLICANT: Vikstrom, Karen L.
APPLICANT: TRANSGENIC MODEL FOR HEART FAILURE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 3, Application US/08938105
Patent No. 6353151
                      110 TERRDQAVMISGESGAGKTEATKRLLQFYAETCPAPERG-----
                                                106 ΕΚΥΑΑΜΜΙΥΤΎΣSGLECVTVNĖΥΚΜΙΡΥΥΝΛΕΥΥΑΛΥΚGKKRSEAPPHIESISDNAYQYML
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC Compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
                                                                                                   50
                                                                                                                                  47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CORRESPONDENCE ADDRESS:
ADDRESSEE: Sheridan Ross p.C.
STREET: 1700 Lincoln St., Sui
                                                                                                                                     4 RASALGSDGVRYTME-----SALTARDRY------GVQDFVLLENFTSEAAFIENLR 49
                                                                                                                                                                                                     Local Similarity
                                                                                                                                                                                                                                                                                                                                                         TELEPHONE:
TELEFAX: (
                                                                                                                                                                                                                                                                                 TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1346 SVISDEGDLQF 1356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1299 SPS-----EDRRWSTELVPEGLOSPRGTPDSESSQGSLELLSYEESQKSKLE 1345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1256
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CITY: Denver
STATE: CO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1214 ESNRISRESSYDCLKESPNKQQERAQSQSGVDL---QED-----VLVRER------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1156 QRFKALKEQRLRETKPEVG--LVNIKGYGSLEIQGSDPSEWEDCSFDNRIKAIEECKSVI 1213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 996 NININGSITF 1006
                                                                          RRFRENLIYTYIGPVLVSVNPYRDLQIYSRQHMERYRGVSFYEVPPHLFAVADTVYRALR 109
                                                                                                         KAKIVSREGGKVTAETENGKTVTVKEDQVMQQNPPKFDKIEDMAML-TFLHEPAVLYNLK 105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           949 SVSSLSDSLEVLHVOREDNKOKGDVV---LQSDH-----VIETLTKTALSADRVN 995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            889
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRSLEDLHQKKVGRA--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RELCMKNMVWKYCRSISPEWKOOLOOKAVASEIFKGKKDNYPQSVPRLFISTRLGTEEIS 888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRVLQSLGSEPIQYAVPVVKYDRKGYKPRPRQLLLTPSAVVIVEDAKVKQRIDYANLTGI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   80203
                                                                                                                                                                                 Conservative 136;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               U.S.A.
                                                                                                                                                                                                                                                                                linear
                                                                                                                                                                                                                                                                                                                                                  (303) 863-9700
03) 863-0223
                                                                                                                                                                                                                                                               protein
                                                                                                                                                                         18.9%; Score 1018; DB 4; 32.1%; Pred. No. 1.8e-87; valive 136; Mismatches 286;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US/08/938,105
                                                                                                                                                                                                                                                                                                                                       ω
..
                                                                                                                                                                                                                                                                                                                                                                                                3595-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Suite 3500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KRESRRMRELEQAIFSLELLKVR-----SLGGI 1298
                                                                                                                                                                                                      Length 1886;
                   ---GAVRDRLLQSNP 160
                                                                                                                                                                       Indels 114;
                                                                                                                                                                    Gaps
                                                165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         948
                                                                                                                                                                    17;
                                                                                                                                                                                                                                                                                                                                                       RESULT 5
US-09-012-515A-12
                                                                                                                                                                                                                                                                                                                                                                                                                          Д
         COUNTRY: USA
ZIP: 02109-2170
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, 1
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Д
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           QY
                                                                                                                                                                                                                                                                                                                     Sequence 12, Application US/09012515A
Patent No. 6127521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ρy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DЪ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Qy
                                                                                                                                                                                                                                                                                                     GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        QV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                   APPLICANT: Berlin, Vivian
APPLICANT: Chiu, Maria Isabel
APPLICANT: Cottarel, Guillaume
APPLICANT: Damagnez, Veronique
TITLE OF INVENTION: IMMUNOSUPPRESSANT TARGET PROTEINS
NUMBER OF SEQUENCES: 35
                                                                                                                                                              CORRESPONDENCE ADDRESS:
ADDRESSEE: FOLEY, HOAG & ELIOT
STREET: One Post Office Square
                                                                                                                           CITY: Boston
STATE: MA
COUNTRY: USA
      APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                757 RDALLVIQW 765
                                                                                                                                                                                                                                                                                                                                                                                                                                              740 RSAICIQSW 748
                                                                                                                                                                                                                                                                                                                                                                                                                                                           698 LDIDHNQYKFGHTKVFFK-AGLLGLLEEMRDERLSRIITRIQAQARGQLMRIEFKKMVER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         640
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             682
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        625
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                580 SGKGKGGKKKGSSFQTVSALHRENLNKLMTNLRTTHPHFVRCIIPNERKAPGVMDNPLVM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 575
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   518 LDRGEFRLLHYAGEVTYSVTGFLDKNNDLLFRNLKETMCSSMNPIMAQCFDKSELSD--- 574
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            520
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          467
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      460
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             459 VLDIAGEE-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          400 LLDIYGFEVFQHNSFEQFCINYCNEKLQQLFIELTLKSEQEEYEAEGIAWEDVQYFNNKI 459
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         405 KVGNEYVTKGQSVQQVYYSIGALAKSVYEKMENWMVTRINATLETKQPRQ-----YFIG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              286 FYQILSNKKPELLDMLLVTNNPYDYAFVSQGE-VSVASIDDSEELLATDSAFDVLGFTAE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        221 FYQLLEGGEEETLRRLGLERNPQSYLYLVKGQCAKVSSINDKSDWKVWRKALSVIDFTED 280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           226
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     166
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LGYKPEEYKMGRTKIFIRFFKTLFATEDSLEVRRQSLATKIQAAWRGFHWRQKFLRV--K
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    HQLRCNGVLEGIRICRKGFPNRILYGDFRQRYRILNPAAIP--EGQFIDSGKGAEKLLGS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HQVKYLGLMENLRVRRAGEAYRRKYEAFLQRYKSLCPETWPMWAGRPQD----GVAVLVRH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          -----KKRP---ETVATQFKMSLLQLVEILRSKEPAYIRCIKPNDAKQPGREDEVLIR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       KQEAHFSLVHYAGTVDYNILGWLEKNKDPLNETVVGLYQKSSLKLMATLFSTYASADTGD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ICDLVEEKFKGIISILDEECLRPGEATDLTFLEKLEDTVKPHPHFLTHKLADQKTR--KS 517
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ISSLPHLKLMGIMSILEEECMFP-KATDMTFKAKLYD-----NHLGKSNNFQKPRNVKG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     IAKGEELLSPLNLEQAAYARDALAKAVYSRTFTWLVRKINRSLASKDAESDSWRSTTVLG 399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EKAGVYKLTGAIMHYGNMKFKQKQREEQAEPDGTEDADKSAYLMGLNSADLLKGLCHPQV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EVEDILISIVASVLHIGNIHFAADE-DSNAQVTTENQIKYLTRILGVEGTTIREALTHRKI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VLEAFGNAKTLRNDNSSRFGKYMDVQFDFKGAPVGGHILSYLLEKSRVVHQNHGERNFHV 220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PatentIn Release #1.0, Version
                                                                                                                                                                               HOAG & ELIOT LLP
US/09/012,515A
                           #1.30
```

756 739 697

579

466

458

404 339 344

Ş

```
APPLICATION NUMBER: US 08/360,144
FILING DATE: 20-DEC-1994
ATTORNEY/AGENT INFORMATION:
NAME: VINCENT, MATTHEW P.
REGISTRATION NUMBER: 36,709
REFERENCE/DOCKET NUMBER: APV-036.02
TELECOMMUNICATION INFORMATION:
TELEPHONE: 617-832-7000
INFORMATION FOR SEQ ID NO: 12:
SEQUENCE CHARACTERISTICS:
LENGTH: 1809 amino acids
TYPE: amino acids
TYPE: amino acids
TOPOLOGY: linear
MOLECULE TYPE: protein
US-09-012-515A-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                              В
                                                                                                                            망
                                                                                                                                                               οy
                                                                                                                                                                                                                                                 Q
                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                      Qy
                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DЪ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ŷ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
  á
                                                                                 Š
                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local S
Matches 193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE:
CLASSIFICATION:
PRIOR APPLICATION DATA:
                                                                                                                                                                      640
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              382 FDAPEAPLPSRKAALETVDRLTESLDFTDYASRIIHPIVRTLDQSPELRSTAMDTLSSLV 441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   137 FYAETCPAPERGGAVR--DRLLQS-----NPVLEAFGNAKTLRN---DNSS---- 177
                                                                                                                                                                                                                                                                                                   726
                                                                                                                                                                                                                                                                                                                                    540 -LDKNNDLLFRNLKETMCSSMNPIMA------QCFDKSELSDKKRPETVATQFKMSL 589
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            452 VQYFNNKIICDLVEEKFKGIISILDE------ECLRPGEATDLTFLEKLEDTVKP 500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         548
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    341 AKGEELLSPLNLEQAAYARDALAKAVYSRTFTWLVRKINRSLASKDAESPSWRSTTVLG- 399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               535
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                493
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             442 FQLGKKYQIFIP------MVNKVLVRHRINHQRYDVLICRIVKGYTLADEEEDPLIY 492
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    178 -RFGKYMDVQFDFKGAPVGGHILSYLLEKSRVVHQNH-------GERNFHVFY 222
753 LGRRKAAKRKWAAQTIRRLIRGFILRHSPRCPENA-FFLDHVRASFLLNLRRQLPRNVLD 811
                                                                                                                                                                                                           778 AAAWGLGQWDSMEEYTCMIPRDTHDGAFYRAVLALHQDLFSLAQQCIDKARDLLDAELTA 837
                                                                                                                                                                                                                                                   590 LQLVEILRSKEPAYIRCIKPNDAKQPGRFDEVLIRHQ------VKYLGLMENLRVR 639
                                                                                                                                                                                                                                                                                                                                                                                669 TPAILESLISINNKL--QQPEAAAGVLEYAMKHF-GELEIQATWYEKLHEWEDALVAYDK 725
                                                                                                                                                                                                                                                                                                                                                                                                                           501 HPHFL-----THKLADOKTRKSLDRGEFRLLHYAGEVTYSVTGF---------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     614 TQTLLN--LAEFMEHSDKGPLPLRDDNGIVLLGERAAKCRAYAKA---LHYKELEFQKGP 668
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      569 AYNPMARDLF-----NAAFVSCWSELNEDQQDELIRSIELALTSQD-----IA-EV 613
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 y Match 3.0%; Score 160; DB 3; Length 1809;
Local Similarity 19.1%; Pred. No. 2e-05;
hes 193; Conservative 121; Mismatches 318; Indels 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            OHRMLRSGQGDALASGPVETGPMKKLH-----VSTINLQKAWGAARR------ 534
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q--LLEGGEEETLRRLGLERNPQSYLYLVKGQCAKVSSINDKSDWKVMRKALSVIDFTED 280
                                         -----VPERREIIRQIWWERLQGCQRIVEDWQKILMVRSLVVSPHEDMRTW----
                                                                                                                               MAGESYSRAYGAMVS----C-----
                                                                                                                                                                    RAGEAYRRKYEAFLQRYKSLCPETWPMWAGRPQDGVAVLVRHLGYKPEE---YKMGRTKI 696
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ----LLDIYGFEVFQHNSFEQFCINYCNEKLQQLF---IELTLKSEQEEYEAEGIAWEP 451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         --SLELL------KDSSSPSLRSCWALAQ 568
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EVEDLLSIVASVLHLGNIHFAADEDSNAQVTTENQLKYLTRLLGVEGTTLREALTHRKII 340
                                                                                   FIRFPKTLFATEDSLEVRRQSLATKIQAAWRGFHWRQKFLRVKRSAIC----IQSWWRGT 752
                                                                                                                                                                                                                                                                                               KMDTNKD-----DPELMLGRMRCLEALGEWGQLHQQCCEKWTLVN---DETQAKMARMAA 777
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ------VSKDDWLEWLRRL-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APV-036.02
                                                                                                                            -----HMLSELEEVIQYKL----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   376;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ---- 547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                           913
                                                                                                                                                                                                                                                                                                                                                                                                                           539
                                                                                                                            867
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   46;
```

	ICRIVKGYTLADEEEDPLIY 492	42 FQLGKKYQIFIPMVNKVLVRHRINHQRYDVL	Db 4	
	GERNFHVFY 222	78 -RFGKYMDVQFDFKGAPVGG	Qy 1:	
	NPVLEAFGNAKTLRNDNSS 1/7 : ::	3/ FYAETCPAPERGGAVRDRLLQS	Db 3:	
4.6	809; 376; Ga	Match 3.0%; Score 160; Cocal Similarity 19.1%; pred. No. 2 s 193; Conservative 121; Mismatch	Quer Best Matcl	
		TOPOLOGI: IINEGI MOLECULE TYPE: protein -360-144A-12	MO S-08-3	
		lin 18		
		INFORMATION FOR SEQ ID NO: 12: SEQUENCE CHARACTERISTICS:	I	
		TELECOMMUNICATION INFORMATION: TELEPHONE: 617-832-1000 TELEFAX: 617-832-7000		
		REGISTRATION NUMBER: 36,709 REFERENCE/DOCKET NUMBER: APV-036.02		
		ORNEY/AGENT IN		
		APPLICATION NUMBER: US/08/360,144A FILING DATE: 20-DEC-1994 CLASSITICATION: 435		
	30	In Release #1.0, Version #1. DATA:		
		BM PC compatible STEM: PC-DOS/MS-DOS		
		MEDIUM TYPE: Floppy disk	5	
		7: USA 02109-2170	3	
		Z C		
		ADDRESSEE: FOLEY, HORG & ELIOT LLP STREET: One Post Office Square CTTV. Roston		
		QUENCES: 35 CE ADDRESS:		
	PROTEINS	MUNOSUPPRESSANT TARGET		
		APPLICANT: Cottarel, Guillaume APPLICANT: Damagnez, Veronique		
		TC INFO	GE	
		6 60-144A-12 ince 12, Application US/08360144A it No. 6150137	RESULT 6 US-08-360- ; Sequence ; Patent N	
	SRGNNL 1160	113 AESTENSPTPSPLOKKVTEDLSKTLLMYTVPAVQGFFRSISLSRGNNL	Db 11:	
	ALSADRVNNI 997	973 VVLQSDALSA	Ωу 9'	
ы	E 111	.053 WAVMNEEAVLHYKHQNQARDEKKKLRHASGANITNATTAATTAATATTTASTEGSNSES	Db 10	
	IDYANLTGISVSSLSDSLFVLHVQREDNKQKGD 972	20 QLLLTPSAVVIVEDAKVKQR-	Qу 9:	
N	105	99 HKQELH-KLMARCELKLGEWQLNLQGINESTIPKVLQYYSAATEHDRSWYKAWHA	Db 9	
	-QYAVPVVKYDRKGYKPRPR 919	64	Ωу 8ι	
	ZTMQQQAQHAIATEDQQ 998	947 HPLPTVHPQVTYAYMKNM-WKSARKIDAFQHMQHFVQTMQQQAQHAIATEDQQ	Db 9,	
	EWKQQLQQKAVASEIFK 863	<	0у 8:	_
	TVLLLGVDPSRQLD 946	914	Db 9:	

46;

493 O'-ILLEGGEETLARLGLEENPOSYLYLVKGOCAKVSSINDKSDWK 493 OHRMLRSGOGDALASGPVETGPMKKLH	RESULT 7 US-09-012-500 S-09-012-500 Sequence 12 Patent No. GENERAL INE APPLICANT: APPLICANT: APPLICANT: APPLICANT: APPLICANT: TITLE OF I. FILE REFER	Oy 920 Db 1053 Oy 973 Db 1113		0y 0	Qy Db
LVKGQCAKVSSINDKSDWKVMRKALSVIDETED 280	44A-12 2, Application US/09012504A 6464974 FORMATION: : Berlin, V. : Cottu, I. : Cottarel, G. : Damagnez, V. INVENTION: IMMUNOSUPPRESSANT TARGET RENCE: APBI-P05-036	OLLLITPSAVVIVEDAKVKOR-IDYANLIGISVSSLSDSLEVLHVOREDNKOKGD WAVMNEAVLHYKHONQARDEKKKLRHASGANITNATTAATTTAATTTASTEGSNSESE VVLQSDHVIETLIKTALSADRVNI 997 AESTENSPTPSPLQKKVTEDLSKTLLMYTVPAVQGFFRSISLSRGNNL 1160	BVPERREIIRQIWWERLQGCQRIVEDWQKILMVRSLTVSPHEDMRTW91 IGRRKAAKRKWAAQTIRRLIRGFILRHSPRCPENA-FFLDHVRASFLLNLRRQLPRNVLD 81:	281 EVEDLLSIVASVLHLGNIHFAADEDSNAQVTTENQLKYLTRLLGVEGTTUREALTHRKII 535	123 OLLEGGEEETLRRLGLERNPOSYLYLVKGQCAKVSSINDKSDWKVMRKALSVIDETED

```
Qy
                                                                                                                                                            Ъ
                                                                                                                                                                                       Qy
                                                                                                                                                                                                                          Db
                                                                                                                                                                                                                                                       Qγ
                                                                                                                                                                                                                                                                                        Дb
                                                                                                                                                                                                                                                                                                                    Qy
                                                                                                                                                                                                                                                                                                                                                     Ъ
                                                                                                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CURRENT APPLICATION NUMBER: US/09/012,504A
CURRENT FILING DATE: 1998-01-23
PRIOR APPLICATION NUMBER: 08/360,144
PRIOR FILING DATE: 1994-12-20
PRIOR APPLICATION NUMBER: 08/250,795
PRIOR FILING DATE: 1994-05-27
NUMBER OF SEQ ID NOS: 35
SOFTWARE: Patentin version 3.1
SEQ ID NO 12
LENGTH: 1809
TYPE: PRT
ORGANISM: Mammalian
US-09-012-504A-12
                                                                                                                                                                                                                                                                                                                                                                                                                  Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                               Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δÃ
947 HPLPTVHPQVTYA-----YMKNN-WKSARKIDAFQHNQHFVQTMQQQAQHAIATEDQQ 998
                               812 TSWPTPPPALREASELLRELCMKNNVWKYCRSISP-----EWKQQLQQKAVASEIFK 863
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match 3.0%; Score 160; DB 4; Length 1809; Best Local Similarity 19.1%; Pred. No. 2e-05; Matches 193; Conservative 121; Mismatches 318; Indels 376;
                                                                                             753 LGRRKAAKRKWAAQTIRRLIRGFILRHSPRCPENA-FFLDHVRASFLLNLRRQLPRNVLD 811
                                                                                                                                                          697 FIREPKTLFATEDSLEVRRQSLATKIQAAWRGFHWRQKFLRVKRSAIC----IQSWWRGT 752
                                                                                                                                                                                              640 RAGFAYRRKYEAFLQRYKSLCPETWPMWAGRPQDGVAVLVRHLGYKPEE---YKMGRTKI 696
                                                                                                                                                                                                                                                         778 AAAWGLGQWDSMEEYTCMIFRDTHDGAFYRAVLALHQDLFSLAQQCIDKARDLLDAELTA 837
                                                                                                                                                                                                                                                                                       590 LQLVEILRSKEPAYIRCIKPNDAKQPGREDEVLIRHQ-----VKYLGLMENLRVR 639
                                                                                                                                                                                                                                                                                                                                                   540 -LDKNNDLLFRNLKETMCSSMNPIMA------QCFDKSELSDKKRPETVATQFKMSL 589
                                                                                                                                                                                                                                                                                                                      726 KMDTNKD-----DÞELMLGRMRCLEALGEWGQLHQQCCEKWTLVN----DETQAKMARMAA 777
                                                                                                                                                                                                                                                                                                                                                                                   669 TPAILESLISINNKL--QQPEAAAGVLEYAMKHF-GËLEIQATWYEKLHEWEDALVAYDK 725
                                                                                                                                                                                                                                                                                                                                                                                                                    501 HPHFL-----THKLADOKTRKSLDRGEFRLLHYAGEVTYSVTGF---------
                                                                                                                                                                                                                                                                                                                                                                                                                                               614 TQTLLN--LAEFMEHSDKGPLPLRDDNGIVLLGERAAKCRAYAKA---LHYKELEFQKGP 668
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              452 VOYFNNKIICDLVEEKFKGIISILDE-------ECLRPGEATDLTFLEKLEDTVKP 500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              569 AYNPMARDLF-----NAAFVSCWSELNEDOODELIRSIELALTSOD-----IA-EV 613
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          548 --SLELL------KDSSSPSLRSCWALAQ 568
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          341 AKGEELLSPLNLEQAAYARDALAKAVYSRTFTWLVRKINRSLASKDAESPSWRSTTVLG- 399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           535 -----VSKDDWLEWLRRU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               281 EVEDLLSIVASVLHLGNIHFAADEDSNAQVTTENQLKYLTRLLGVEGTTLREALTHRKII 340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         493 OHRMIRSGOGDALASGPVETGPMKKLH------VSTINLOKAWGAARR------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     223 Q--LLEGGEEETLRKLGLERNPOSYLYLVKGQCAKVSSINDKSDWKVMRKALSVIDFTED 280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    442 FOLGKKYQIFIP------MVNKVLVRHRINHQRYDVLICRIVKGYTLADEEEDPLIY 492
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   178 -REGKYMDVQEDEKGAPVGGHILSYLLEKSRVVHONH------GERNEHVEY 222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 382 FDAPEAPLPSKKAALETVDRLTESLDETDYASRIIHPIVRTLDOSPELRSTAMDTLSSLV 441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                137 FYAETCPAPERGGAVR--DRLLQS------NPVLEAFGNAKTLRN---DNSS--- 177
                                                                                                                              -----VPERREIIRQIWWERLQGCQRIVEDWQKILMVRSLVVSPHEDMRTW----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      -----LLDIYGFEVFQHNSFEQFCINYCNEKLQQLF---IELTLKSEQEEYEAEGIAWEP 451
                                                                946
                                                                                                                                913
                                                                                                                                                                                              867
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         534
```

```
; LENGTH: 2549 amino aci
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
US-08-471-112A-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .8
Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-08-471-112A-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 3, Application US/08471112A Patent No. 6313264
                                      Query Match 3.0%; Score 160; DB 4; Length 2549; Best Local Similarity 19.1%; Pred. No. 3.7e-05; Matches 193; Conservative 121; Mismatches 318; Indels 376;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COUNTRA.

ZIP: 20005-331,
COMPUTER READABLE FORM:
COMPUTER: FLOPPY disk
MEDIUM TYPE: Floppy disk
TAMBITER: TBM PC compatible
TAMBITER: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GENERAL INFORMATION:
                                                                                                                                                                                                                                                      TELEFAX: 202-408-4400
INFORMATION FOR SEQ ID NO: 3:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                        NAME: Siekman, Michael T.
REGISTRATION NUMBER: 36,276
REFERENCE/DOCKET NUMBER: 01142.0058-00000
TELECOMMUNICATION INFORMATION:
TELEPHONE: 202-408-4000
TELEPAX: 202-408-4000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CURRENT APPLICATION DATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1113 AESTENSPTPSPLQKKVTEDLSKTLLMYTVPAVQGFFRSISLSRGNNL 1160
                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: US 08/207,975 FILING DATE: 08-MAR-1994 ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: US 08/312,023 FILING DATE: 26-SEP-1995 PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/384,524
FILING DATE: 13-FEB-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1053 WAVMNFEAVLHYKHQNQARDEKKKLRHASGANITNATTAATTAATATTTASTEGSNSESE 1112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          973
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            920 QLLLTPSAVV-----IVEDAKVKQR-IDYANLTGISVSSLSDSLFVLHVQREDNKQKGD 972
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  999 HKQELH-KLMARCEL--KLGEWQLN---LQGINESTIPKVLQYYSAATEHDRSWYKAWHA 1052
137 FYAETCPAPERGGAVR--DRLLQS------NPVLEAFGNAKTLRN---DNSS--- 177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               864 GKKDNYPQSVPRLFISTRLGTEEISPRVLQSLGSEPI----QYAVPVVKYDRKGYKPRPR 919
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: US/08/471,112A FILING DATE: 06-JUN-1995 CLASSIFICATION: 536
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE: 06 CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STREET: 1300 I S:
CITY: Washington
STATE: DC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ADDRESSEE: Finnegan, Henderson, Farabow, Garrett ADDRESSEE: Dunner, L.L.P. STREET: 1300 I Street, N.W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VVLQSD-----HVIETLTKT-----ALSADRVNNI 997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     R
                                                                                                                                                                                                                                      2549 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Failli, Amedeo F.
Caggiano, Thomas J.
Nakanishi, Koji
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Chen, Yanqiu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Molnar-Kimber, Katherine L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PatentIn Release #1.0, Version #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EFFECTOR PROTEINS OF RAPAMYCIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    23
                                      Gaps
                                           46;
```

Db Db	Db	Qy	Db	Qy	Db	Qy	Db	Qy	Дb	Qy	. Dp	Qy	ДĎ	Qy	Db	Qy	Db	Qy	Db	Qy	Db	Qy	Дb	Qy	рь	Qy	Db	Qy	Db	Оу	DЬ
1853	1793	920	1739	864	1687	812	1654	753	1608	697	1578	640	1518	590	1466	540	1409	501	1354	452	1309	400	1288	341	1275	281	1233	223	1182	178	1122
VVLQSD	EAVLHYKHQNQARDEKKKLRHASGANITNATTAATTATTT	KGD 97	:: VLQYYSAATEHDRSWYKAWHA	GKKDNYPQSVPRLFISTRLGTEEISPRVLQSLGSEPIQYAVPVVKYDRKGYKPRPR 919	HPLPTVHPQVTYAYMKNM-WKSARKIDAFQHMQHFVQTMQQQAQHAIATEDQQ 1738	VWKYCRSISPEWKQQLQQKAV	LKYASLCGKSGRLALAHKTLVLLLGVDPSRQLD 1686			FIRFPKTLFATEDSLEVRRQSLATKIQAAWRGFHWRQKFLRVKRSAICIQSWWRGT 752	MAGESYSRAYGAMVSC	RAGFAYRRKYEAFLQRYKSLCPETWPMWAGRPQDGVAVLVRHLGYKPEEYKMGRTKI 696	AAAWGLGQWDSMEEYTCMIPRDTHDGAFYRAVLALHQDLFSLAQQCIDKARDLLDAELTA 1577	LQLVEILRSKEPAYIRCIKPNDAKQPGREDEVLIRHQVKYLGLMENLRVR 639	KMDTNKDDPELMLGRMRCLEALGEWGQLHQQCCEKWTLVNDETQAKMARMAA 1517	LFRNLKETMCSSMNPIMAQCF	TPAILESLISINNKLQQPEAAAGVLEYAMKHF-GELEIQATWYEKLHEWEDALVAYDK 1465	LADOKTRKSLDRGEFRLL	TQTLLNLAEFMEHSDKGPLPLRDDNGIVLLGERAAKCRAYAKALHYKELEFQKGP 1408	EEKFKGIISILD	AYNPMARDLE NAAFVSCWSELNEDQQDELIRSIELALTSQDIA-EV 1353	LLDIYGFEVFQHNSFEQFCINYCNEKLQQLFIELTLKSEQEEYEAEGIAWEP 451	SLELLKDSSSPSLRSCWALAQ 1308	AKGEELLSPLNLEQAAYARDALAKAVYSRTFTWLVRKINRSLASKDAESPSWRSTTVLG- 399		- ∺<	QHRMLRSGQGDALASGPVETGPMKKLHVSTINLQKAWGAARR 1274	LEGGEEETLRRLGLERNPQSYLYLVKGQCAK	FQLGKKYQIFIPMVNKVLVRHRINHQRYDVLICRIVKGYTLADEEEDPLIY 1232	-RFGKYMDVQFDFKGAPVGGHILSYLLEKSRVVHQNHGERNFHVFY 222	

RESULT 9
PCT-US95-06722-12
; Sequence 12, Application PC/TUS9506722
; GENERAL INFORMATION:

APPLICANT:

```
PCT-US95-06722-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity
Matches 193; Conserv
                                                           1578 MAGESYSRAYGAMVS----C---
                                                                                                              1518 AAAWGLGQWDSMEEYTCMIPRDTHDGAFYRAVLALHQDLFSLAQQCTDKARDLLDAELTA 1577
                                                                                                                                                                                   1466 KMDTNKD-----DPELMLGRWRCLEALGEWGQLHQQCCEKWTLVN----DETQAKMARMAA 1517
                                                                                                                                                                                                                                                     1409 TPATLESLISTNUKL--QQPEAAAGVLEYAMKHF-GELETQATWYEKLHEWEDALVAYDK 1465
                                                                          640 RAGFAYRRKYEAFLQRYKSLCPETWPMWAGRPQDGVAVLVRHLGYKPEE---YKMGRTKI 696
                                                                                                                                                                                                                                                                                                                          1354 TOTILN--LAEFMEHSDKÖPLPLRDDNGIVLLGERAAKCRAYAKA---LHYKELEFQKGP 1408
                                                                                                                                                590 LQLVETLRSKEPAYTRCIKPNDAKQPGRFDEVLIRHQ-----VKYLGLMENLRVR 639
                                                                                                                                                                                                                                                                                                                                                                                               1309 AYNPMARDLE-----NAAFVSCWSELNEDQQDELIRSIELALTSQD-----IA-EV 1353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               INFORMATION FOR SEQ ID NO: 12:
SEQUENCE CHARACTERISTICS:
LENGTH: 2549 amin -----
                                                                                                                                                                                                                     540 -LDKNNDLLFRNLKETMCSSMNPIMA------QCFDKSELSDKKRPETVATQFKMSL 589
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1288 -- SLELL-------KDSSSPSLKSCWALAQ 1308
                                                                                                                                                                                                                                                                                                                                                            452 VQYFNNKIICDLVEEKFKGIISILDE------ECLRPGEATDLTFLEKLEDTVKP 500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1275 -----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1233 QHRMLRSGQGDALASGPVETGPMKKLH------VSTINLQKAWGAARR------ 1274
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1182 FOLGKKYQIFIP------MVNKVLVRHRINHORYDVLICRIVKGYTLADEEEDPLIY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1.122 FDAPEAPLPSKKAALETVDRUTESLDFTDYASRIIHPIVRTLDQSPELRSTAMDTLSSLV 1181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     341 AKGEELLSPLNLEQAAYARDALAKAVYSRTFTWLVRKINRSLASKDAESPSWRSTTVLG- 399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  281 EVEDLLSIVASVLHLGNIHFAADEDSNAQVTTENOLKYLTRLLGVEGTTLREALTHRKII 340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   178 -REGKYMDVQEDEKGAPVGGHILSYLLEKSRVVHQNH------GERNEHVEY 222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        137 FYAETCPAPERGGAVR--DRLLOS------NPVLEAFGNAKTLRN---DNSS---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TOPOLOGY: linear MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/250,795
FILING DATE: 27-MAY-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/250,795
FILING DATE: 20-DEC-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: ASCII (text)
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE OF INVENTION: Immunos
NUMBER OF SEQUENCES: 25
COMPUTER READABLE FORM:
MEDIUM TYPE: FLOPPY disk
                                                                                                                                                                                                                                                                                        HPHFL-----THKLADOKTRKSLDRGEFRLLHYAGEVTYSVTGF------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: PCT/US95/06722
                                                                                                                                                                                                                                                                                                                                                                                                                               ----LLDIYGFEVFOHNSFEOFCINYCNEKLOOLF---IELTLKSEOEEYEAEGIAWEP 451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Q--LLEGGEEETLRRLGLERNPQSYLYLVKGQCAKVSSINDKSDWKVMRKALSVIDFTED 280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3.0%; Score 160; DB 5; Length 2549;
19.1%; Pred. No. 3.7e-05;
Conservative 121; Mismatches 318; Indels 376;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Immunosuppressant Target Proteins 25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          -----VSKDDWLEWLRRL----- 1287
                                             -----HMLSELEEVIQYKL----
                                             1607
                                                                                                                                                                                                                                                                                           539
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          46;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-08-905-223-395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            덩
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  QY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Qy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               망
                                                                                                                                                                                                                                                                                                       CLASSIFICATION: 536
ATTORNEY/AGENT INFORMATION:
NAME: Israelsen, Ned A.
REGISTRATION UNUBER: 29,655
REFERENCE/DOCKET NUMBER:
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Qy
                                                                                                                                                                                                                                                         TELEFAX: (619) 235-0176
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 395, Application US/08905223
Patent No. 6222029
                                                                                                                                                                                                                   SEQUENCE CHARACTERISTICS:
LENGTH: 103 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GENERAL INFORMATION:
                                                                                                                                   MOLECULE TYPE:
ORIGINAL SOURCE:
ORGANISM: Hom
                                                                                                      FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER: IBM PC compatible
OPERATING SYSTEM: Win95
SOFTWARE: Word
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/905,223
FILING DATE:
IDENTIFICATION METHOD: Von Heijne matrix OTHER INFORMATION: score 3.6
OTHER INFORMATION: seq CTSLLQLYDASNS/EW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy Disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STREET: 501 West BI
CITY: San Diego
STATE: California
COUNTRY: USA
ZIP: 92101-3505
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Edwards,
APPLICANT: Duelert,
APPLICANT: Lacroix,
                                                                  LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE OF INVENTION:
NUMBER OF SEQUENCES:
                                                              NAME/KEY: sig_peptide LOCATION: -72..-1
                                                                                                                    TISSUE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1853 AESTENSPTPSPLQKKYTEDLSKTLLMYTYPAVQGFFRSISLSRGNNL 1900
                                                                                                                                                                                        TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1793 WAVMNFEAVLHYKHQNQARDEKKKLRHASGANITNATTAATTAATATTTASTEGSNSESE 1852
                                                                                                                                                                                                                                                                                             TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1739 HKQELH-KIMARCFL--KLGEWQLN---LQGINESTIPKVLQYYSAATEHDRSWYKAWHA 1792
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STREET: 501 West Broadway
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       973 VVLQSD------HVIETLTKT-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1654
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   920 QLLLTPSAVV-----IVEDAKVKOR-IDYANLTGISVSSLSDSLFVLHVQREDNKQKGD 972
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       864 GKKDNYPQSVPRLFISTRLGTEEISPRVLQSLGSEPI----QYAVPVVKYDRKGYKPRPR 919
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            812 TSWPTPPPALREASELLRELCMKNNVWKYCRSISP-----EWKOOLOOKAVASEIFK 863
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HPLPTVHPQVTYA-----YMKNN-WKSARKIDAFQHMQHFVQTMQQQAQHATATEDQQ 1738
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FIRFPKTLFATEDSLEVRROSLATKIQAAWRGFHWROKFLRVKRSAIC----IQSWWRGT 752
                                                                                                                                                                                                      AMINO ACID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LGRRKAAKRKWAAQTIRRLIRGFILRHSPRCPENA-FFLDHVRASFLLNLRRQLPRNVLD 811
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo Sapiens
                                                                                                                                                                                     LINEAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Edwards, Jean-Baptiste D
                                                                                                              Brain
                                                                                                                                                                                                                                                                                          (619) 235-8550
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Knobbe, Martens, Olson &
                                                                                                                                                                     PROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Bruno
5' ESTs FOR SECRETED PROTEINS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Aymeric
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     503
                                                                                                                                                                                                                                                       395:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Bear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ---ALSADRVNNI 997
```

g 9 В Ş Db Ş Db Ş В Ş Б Ş Ъ Ş В á D Ş DЬ Ş В ð

```
Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                    В
                                                                                                                                             õ
                                                                                                                                                                                            B
                                                                                                                                                                                                                             8
                                                                                                                                                                                                                                                                                 Вþ
                                                                                                                                                                                                                                                                                                                       Qy
                                                                                                                                                                                                                                                                                                                                                                      Вр
                                                                                                                                                                                                                                                                                                                                                                                                       δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; ORGANISM: Staphylococcus
US-09-134-001C-3945
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 11
US-09-134-001C-3945
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                        В
                                                          δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-08-905-223-395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:

APPLICANT: LYNN DOUCETTE-Stamm et al
APPLICANT: LYNN DOUCETTE-STAMM et al
TITLE OF INVENTION: NUCLEIC ACID AMD AMINO ACID SEQUENCES RELATING TO STAPHYLOCOCCUS
TITLE OF INVENTION: EPIDERMIDIS FOR DIAGNOSTICS AND THERAPEUTICS
FILE REFERENCE: GTC-007
CURRENT APPLICATION NUMBER: US/09/134,001C
CURRENT FILING DATE: 1998-08-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR APPLICATION NUMBER: US 60/064,964
PRIOR FILING DATE: 1997-11-08
PRIOR APPLICATION NUMBER: US 60/055,779
PRIOR FILING DATE: 1997-08-14
NUMBER OF SEQ ID NOS: 5674
SEQ ID NO 3945
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Patent No. 6380370
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LENGTH: 1529
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              675 VAVLVRHLGYKPE-------EYKMGRTKIFIRFPKTLFATEDSLEVRRQ 716
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   615 PGRFDEVLIRHQVKYLGLMENLRVRRAGFAYRKYEAFLQRYKSLCPETWPMWAGRPQDG 674
                                                                                                                                                                                                                                                                                                                                                                                                              171
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 135
                                                                   402
                                                                                                                                                                                                                                        284
                                                                                                                                                                                                                                                                                                                           224
                                                                                                                                                                                                                                                                                                                                                                      224
                                                                                                                                                                                                                                                                                                                                                                                                                                                         164
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2.8%;
Local Similarity 29.2%;
nes 35; Conservation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      45 -- VLMRNLAL-PEDVRGKCTSLLQLYDASNSEWQLGKTKVFLR----ESLEQKLEKRRE 96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    25 DRVGVQDFVLLENFTSEAAF---IENLRRFFRENLI----YTYIGPVLVSVNPYRDLQIY 77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PDQFDQAVVLNQLRYSGMLETVRIRKAGYAVRRPFQDFYKRYK--
                                                                                                                                                                                                                                                                                                                                                                                                 -LRNDNSSRFGKYMDVQFDFKGAPVGGHILSYLLEKSRVVHQNHGERNF------HVFYQ
                                                                                                                                                                                                                                                                                                                                                                    WLRSDQIK--GLYLDLQNEAYQSKLG------LVHSRFSTNTFPSWKRAHPNRM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DACGIGFYANMDNKRSHDIIEKSLEMLRRLDHRGGVGADGITGDGAGIMTEIPY---QLF 105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   131;
                                                              DIYGFEVFQHNSFEQFCINYCN-EKLQQLFIELTLKSEQEEYEAEGIAWEPVQY-----
                                                                                                           AMLLIP --- EPWLYNESNDKKVRSFY - EFYSYLME
                                                                                                                                                 EELLSPLNLEQAAY--ARDALAKAVYSRTFTWLVRKINRSLASKDAESPSWRSTTVLGLL 401
                                                                                                                                                                                                                                    DLLSIVASVLHLGNIHFAADEDSNAQVTTENQLKYLTRLLGVEGTTLREALTHRKIIAKG
                                                                                                                                                                                                                                                                                                                         LLEGGEEETLRRLGLERNPQSYLYLVKGQCAKVSSINDKSDWKVMRKALSVIDFTEDEVE
                                                                                                                                                                                                                                                                                                                                                                                                                                                      AQHVADTMPYIQQVFVDITGVKEVEKRLFLARKQIEKYSETQSIDLYFTSLSHRTIVYKG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LQFYAETCPAPER------GGAVRDRLLQSNPVLEAFGNAKT----------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EQLTEFKVPGEGYYAV--GLFFSKEKVRDSIHEEMFNQYFESEGFKVIGYRDVPVDTRAI 163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SRQHMERYRGVSFYEVPPHLFAVADTVYRALRTERRDQAVMISGESGAGKTEA---TKRL 134
                                                                                                                                                                                            ****-----KVHFIVDEDGSDSSIVDNALEFLSLAMEPE------KA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2.4%; Score 130; DB 4; Length 1529; 18.2%; Pred. No. 0.011;
                        --ISFCNGDKIGAL----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           epidermidis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                26; Mismatches 16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 152.5; DB 4; Pred. No. 7.1e-07;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                 ---INTIKGNVNWMRARQNKLVETLFEDEKD
                        ----TDRNGL--RPGRYTITKDN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 213; Indels 276;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                43;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                            223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           44
                                                                                                                                                                                                                                    343
                                                                                                                                                                                                                                                                                 303
                                                                                                                                                                                                                                                                                                                                                                    269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 170
                                                                                                                                                                                                                                                                                                                                                                                                                                                      223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Вр
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DЪ
                                                                                                    δÃ
                                                                                                                                                 В
                                                                                                                                                                                         οy
                                                                                                                                                                                                                                    Ъ
                                                                                                                                                                                                                                                                          Qy
                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                               Qy
                                                                                                                                                                                                                                                                                                                                                                                                          DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ρy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ; ORGANISM: Staphylococcus epidermidis US-09-134-001C-3762
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 12
US-09-134-001C-3762
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 QY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
APPLICANT: Lynn Doucette-Stamm et al
APPLICANT: Lynn Doucette-Stamm et al
TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO STAPHYLOCOCC
TITLE OF INVENTION: EPIDERWIDIS FOR DIAGNOSTICS AND THERAPEUTICS
FILE REFERENCE: GTC-007
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUMBER OF SEQ ID NOS: 5674
SEQ ID NO 3762
LENGTH: 567
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 3762, Application US/09134001C Patent No. 6380370
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CURRENT APPLICATION NUMBER: US/09/134,001C CURRENT FILING DATE: 1998-08-13 PRIOR APPLICATION NUMBER: US 60/064,964 PRIOR FILING DATE: 1997-11-08 PRIOR APPLICATION NUMBER: US 60/055,779 PRIOR APPLICATION NUMBER: US 60/055,779 PRIOR FILING DATE: 1997-08-14
                      570
                                                                                                                                                                                            463
                                                                                                                                                                                                                                    260
                                                                                                                                                                                                                                                                                 416
                                                                                                                                                                                                                                                                                                                                                                    362
                                                                                                                                                                                                                                                                                                                                                                                                            165
                                                                                                                                                                                                                                                                                                                                                                                                                                                      302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       244 --SYLYLVKGQCAKVSSINDKSDWKVMRKALSVIDFTEDEVEDLLSIVASVLHLGNIHFA 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          204 EKSRVVHQNHGERNF------HVFYQLLEGGEEETLRRLGLERNPQ------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -PHPHFLTHKLADQKTRKSLDRGEFRLLHYAGEVTYSVTGFLDKNNDLLFRNLK-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ----PPIDA----YREKIVTSELSYLGSEGNL---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LPYEQW----LKDYKNKNDLDN-----IYYQSS-----DWDDQTLFRLQKQFAYTK 496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   YIRCIKPNDAKQPGREDEVLIRHQVKYLGLMENLRVRRAGEAYRRKYEAFLQRYKSLCPE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EDINKYMTDLVINKKDPIGAMGYDAPIAVLNDK -- PESLENYFKQLFAQVTN ---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FIVFSSEVGVIDVPEENVAFKG-----QLNPGKLLLVDFLQNKVVENNELKTNIANE
                    SELSDKKRPETVATQFKMSLLQLVEILRSKEPAYIRCIKPNDAKQPGRFDEVLIRHQVKY 629
                                                                                                       GEFRLLHYAGEVTYSVTGFLD-----KNNDL---LFRN--LKETMCSSMNPIMAQCFDK 569
                                                                                                                                                                                         LVEEK--FKGIISILDEECLRPGEATDLTFLEKLEDTVKPHPHFLTHKLADQKTRKSLDR
                                                                                                                                                                                                                                    QVFNPDQMVENKSYIGFIDDSIEKLIIE-SFRTEKVIYEQLEVAINNVHTKYFDVSCIPI 318
                                                                                                                                                                                                                                                                                                                       -TRALFYTT-NDLARRLQKLNNSQKIQSNRLKTTLENIPSSYL-MIDKHGEIVVANHAYY 259
                                                                                                                                                                                                                                                                                                                                                               LAKAVYSRTFTWLVRKINRSLASKDAESPSWRST----TVLGLLDIYGFEVFQHNSFE
                                                                                                                                                                                                                                                                                                                                                                                                            SRSINRTYIRPINEVTYATSLLA------DGYYHVRV------PESNVKE-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RYTYKNTIDDKTIYISGINNE------IIDLQKD-LWKYLSIV-GVIVLFTVYLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KEKEITNIAHNEKNIILIKEKDKDKIIYS--SGNIKDIDHRIDNEANPSKLINKNTKLGM 117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -----ETMCSSMNPIMAQCFDK--SELSDKKRPETVATQFKMSLLQLVEILRSKEPA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ---FNNKI-ICDLVEEK--FKGIISILDEECLRPGEATDLTFLE-----KLEDTVK--
                                                                                                                                                 LTKSKKNLQGMVVVLH------DITNLQKLENLRREFVANVSHELKTPIT-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADEDSNAQVTTENQLKYLTRLLGVEGTTLREALTHRKIIAKGEELLSPLNLEQAAYARDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative 106;
                                                                                                                                                                                                                                                                              -----CINYCNEKLQQLFIELTLKSEQEEYEAEGIAWEPV--QYFNNKIICD
                                                              -SIKGFAETLIEGAKNDEQSLDMFLNIILKES--NRIESLVTDLLDL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2.3%; Score 126; DB 4; Length 567; 18.4%; Pred. No. 0.0048;
::
<del>-</del>::
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches 172;
=
..
=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels 142;
::
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             -LCPD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          454
                                                                                                                                                                                                                                                                                                                                                                                                                                                    361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           602
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                552
```

462

362

202

243

25;

Query Match Best Local Similarity 19.7%; Pred. No. 0.024; Matches 195; Conservative 143; Mismatches 392; Indels 260; Gaps 44; Qy 138 YAETCPAPERGGAVRDRILQSNPVLEAFGNAKTLRNDNSSRF 179 Db 38 WAETIPYGEEGISSPVSGGWDTSTWGLKSNTEPQSPPIASPKAITKPVRRTYVDESENFF 179 Db 38 WAETIPYGEEGISSPVSGGWDTSTWGLKSNTEPQSPPIASPKAITKPVRRTYVDESENFF 97 Qy 180 GKYMDVQFDFKGAPVGGHILSYLLEKSRVVHONHGERNFHVFYOLLEGGEEETLRRL 236 Db 98 SAFLSPTDVQTIQKSPVVSKPPAKSQRPEEEVKSL 133 QY 237GLERNPOSYLTLVKGOCAKVSSINDKSDMKVMTKA 271 Db 134 HESLHIGQSRTPETTESQVKDSSLCVSGETLAAGTSSPKTEGKHEETVNKESDMKVPTVS 193 QY 272 LSVIDFTEDEVDLLSIVASVLHLGNIHFAA	COMPUTER READABLE FORM: MEDLUM TYPE: Floppy disk COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: Patentin Release #1.0, Version #1.25 APPLICATION DATA: CLASSIFICATION NUMBER: PCT/US93/03077 FILING DATE: 1930331 CLASSIFICATION NUMBER: US/07/862,025 APPLICATION NUMBER: UT/07/862,025 ATTORNEY/AGENT INFORMATION: NAME: REMEMBER: QS/775 REFERENCE/DOCKET NUMBER: UT/07/87 REJETANICATION INFORMATION: TELEPHONE: 713-787-1540 TELEEX: 713-749-2679 INFORMATION FOR SEQ ID NO: 1: SEQUENCE CHARACTERISTICS: LENGTH: 1093 emino acids TYPE: AMINO ACID STRANDEDNESS: unknown ODLECULE TYPE: DINKnown TOPOLOGY: unknown TOPOLOGY: unknown TOPOLOGY: unknown TOPOLOGY: unknown	Db 407 SHIEQQKELEINYMNLSELAINIIDNLQTQAYNKRIKIQSEIEKDVIIEAHENKI 461 Qy 630 LGLMENLRVRRAGFAYRRKYEAFLQ 654 Db 462 AQVITNLLSNAINYSSEDNKVIVRVYRNDNKVYLE 496 RESULT 13 PCT-US93-03077-1 Sequence 1, Application PC/TUS9303077 GENERAL INFORMATION: Regents, The University of Texas System APPLICANT: Board of Regents, The University of Texas System APPLICANT: Wal, Foon Kin TITLE OF INVENTION: PROTEIN CELULAR FACTOR USEFUL FOR NUMBER OF SEQUENCES: 7 CORRESPONDENCE ADDRESS: 7 CORRESPONDENCE ADDRESS: ATROID White & Durkee STREET: P.O. Box 4433 CITY: Houston STATE: Texas COUNTRY: USA ZIP: 77210
RESULT 14 US-09-356-952-2 Sequence 2, Application US/09356952 Patent No. 6117663 PATENTAL INFORMATION: APPLICANT: Boriack-Sjodin, Ann APPLICANT: Muriyan, John TITLE OF INVENTION: A CRYSTAL OF A RAS-SOS COMPLEX AND METHODS OF USE FILE REFERENCE: 600-1-228N CURRENT APPLICATION NUMBER: US/09/356,952 EARLIER APPLICATION NUMBER: US/09/356,952 EARLIER APPLICATION UMBER: 60/093,631 NUMBER OF SEQ ID NOS: 14 SOFTWARE: Patentin Ver. 2.0	S P R E I	y 314 b 250 b 302 y 365 b 302 y 409 y 409 1468 1 528 y

```
Š
                                                                     B
                                                                                                    Qγ
                                                                                                                                            В
                                                                                                                                                                        QΥ
                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                    Qy
                                                                                                                                                                                                                                                                                          Ъ
                                                                                                                                                                                                                                                                                                                       Qy
                                                                                                                                                                                                                                                                                                                                                                Вр
                                                                                                                                                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM: Homo sapiens US-09-356-952-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best Local Similarity Matches 212; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LENGTH: 1333
TYPE: PRT
                                                                                                                                                                                                                    618
                                                                                                                                             661
                                                                                                                                                                                                                                                        643
                                                                                                                                                                                                                                                                                           569
                                                                                                                                                                                                                                                                                                                                                                                                                                       485
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             425
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       388
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           130
                                                                                                                                                                               702
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 188 LTDEEPSTSGEQTYYDLVKAFMAEIRQYIRELNLIIKVFREPFVSNSKLFSANDVENIFS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             70 PYRDLQIYSRQHMERYRGVSFYEVPPHLFAVADTVYRALRTERRDQAVMISGESGAGKTE 129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ---LILQLLNMLCQAQPRSASDVEERVQKSFPHPIDKWAIADAQSAIEKRKRRNPLSLPV 107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            YSRTFTWLVR-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AADED-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             E---KIHPLLKEVLGYKIDHQVSVY------IVAVLEYISADILKLVG-----NY
IETFOLLTLHPIEIARQLTLLESDLYRAVQPSELVGSVWTKEDKEINSPNLLKMIRHTTN
                                   VRASFLLNLR-----RQL------PRNVLDTSWP-----TPPPALR-----
                                                                                                        -WRGTLGRRKAAKRKWAAQTIRRLIR-------GFILRHSPRCPENAFFLD---H 792
                                                                                                                                          ---IAIENGDQPLSAELKRFRKEYIQPVQLRVLNVCR--HWVEHHFYDFERDAYLLQRME
                                                                                                                                                                           KTLFATED-----SLEVRR-----QSLATKIQAAWRGEHW-RQKFLRVKRSAICIQSW-
                                                                                                                                                                                                                 YADPNEVRTELTTYRSFC------KPQELLSLIIERFEIPEPEPTEADR-----
                                                                                                                                                                                                                                                  FAYRRKYEAFLQRYKSLCPETWPMWAGRPQDGVAVLVRHLGY-KPEEYKMGRTKIFIRFP 701
                                                                                                                                                                                                                                                                                        LPSADVYRFAEP------DSEENIIFEENMQPKAGIPIIKAGTVIKLIERLTYHM--
                                                                                                                                                                                                                                                                                                                           LQLVEILRSKEPAYIRCIKPNDAKQPGRFDE-----VLIRHQVKYLGLMENLRVRRAG 642
                                                                                                                                                                                                                                                                                                                                                               AKSAEEKNNWMAALISLQYRSTLERM------LDVTMLQEEKE-----
                                                                                                                                                                                                                                                                                                                                                                                                VTGFLDKNN-----DLLFRNLKETMCSSMNPIMAQCFDKSELSDKKRPETVATQFKMSL 589
                                                                                                                                                                                                                                                                                                                                                                                                                                    NAEYRLKEKFFMRKVQINDKDDTNEYKHAFEIILKDENS------VIFS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EEYEAEGIAWEPVQYFNNKIICD----LVEEKFKGIISILD--EECLR-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ESPSWRSTTVLGLLDIY-GFEVFQHNSF-----EQFCINYCNE-KLQQLFIELTLKSEQ 439
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     HDRFLSQLSKPGAALYLQSIGEGFKEAVQYVLPRLLLAPVYHCLHYFELLKQLEEKSEDQ 367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RIVDIHELSVKLLGHIEDTVEMTDEGSPHPLVGSCFEDLAEELAFDPYESYARDILRPGF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VRNIRHYEITKQDIKVAMCADK-----VLMDMFHQDVEDI-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          L-----YLVKGQCAKVSSINDKSDWKVMRKALSVIDFTEDEVEDLLSIVASVLHLGNIHF 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               QFDFKGAPVGGHILSYLLEKSRVVHQNHGERNFHVFYQLLEGGEEETLRRLGLERNPQSY 245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATKRLLQFYAETCPA-PERGGAVRDRLLQS--NPVLE-AFGNAKTLRNDNSSRFGKYMDV 185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PY---EFFSEENAPKWRGL----LVPALKKVQGQVHPTL--ESNDDALQYVEE-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IQKNIDGWEGKDIGQCCNEFIMEGTLTRVGAKHERHIFLFDGLMICCKSNHGQPRLPGAS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EDKECLKQAITALLNVQSGMEKICSKSLAKRRLSESACRFYSQQMKGKQLAIK---KMNE 424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             -----TRLLG-VEGTT--LREALTHRKIIAKGEELLSPLNLE-QAAYARDALAKAV 366
                                                        IGTV--RGKAMKKW-VESITKIIQRKKIARDNGPGHNITFQSSP--PTVEWHISRPGH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ---DLTFLEKLE----DTVKPHPHFLTHKLADQKTRKSLDRGEFRLLHYAGEVTYS 535
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2.3%; Score 123.5; DB 3; 18.3%; Pred. No. 0.037;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  175;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches 369;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -----KINRSL--ASKDA 387
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    --SNAQVTTENQLKYL-- 319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 1333;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  405;
                                                                                                                                                                                                                                                                                                                                                             -EQMR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -PGEA 485
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          -NILS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                               568
                                                                                                                                                                                                                                                                                                                                                                                                                                      527
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               148
                                                                                                                                                                                                                                                                                        617
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61;
```

```
В
                                QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Q
                                                                                                                                    US-08-290-731C-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 15
US-08-290-731C-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 2, Application Patent No. 5843646
                                                                                                   Query Match
                                                                    Matches
                                                                                    Best
                                                                                                                                                                                                                                   TELEX: 6491103
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                   REFERENCE/DOCKET NUMBER: Q-TELECOMMUNICATION INFORMATION: TELEPHONE: (202) 293-7060
                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: PCT/AU93/00068 FILING DATE: 17-FEB-1993 PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0,
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                   SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                   FILING DATE: 17-FEB-1992
ATTORNEY/AGENT INFORMATION:
NAME: KIT, Gordon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CORRESPONDENCE ADDRESS:
ADDRESSEE: SUGHRUE, MION,
                                                                                                                                                    TOPOLOGY: 1: MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                        Local Z
217;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               823
                                                                                                                                                                                    LENGTH:
TYPE: a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: US/OFILING DATE: 17-OCT-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STREET: 2100 PENICITY: WASHINGTON STATE: D.C.
                                    70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE: 1: CLASSIFICATION:
                                                                                                                                                                                                                                                                     TELEFAX:
                                                                                                                                                                                                                                                                                                                                     REGISTRATION NUMBER: 30,764
                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COUNTRY:
                                PYRDLQIYSRQHMERYRGVSFYEVPPHLFAVADTVYRALRTERRDQAVMISGESGAGKTE 129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EKEFTDYLFNKSLEIEPRNPK 1022
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            HGKELINFSKRRKVAEITGEIQQYQNQPYCLRV-----ESDIKRFFENLNPMGNSM 1001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LTLWFEKCIVETENLEERVAVVSRIIEILQVFQELNNFNGVLEVVSAMNSSPVYRLDHTF 890
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LGSEPIQYA----VPVVKYDRKGYKPRPRQLLLTPSAVVIVEDAKVKQRIDYANLTGISV 950
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EQIPSRQKKILEEAHELSEDHYKKYLAKLRSINPPCVPFFGIYLTNILKTEEGNPEVLKR 950
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              QQL--QQKAVASEIFKGKKDNY-------PQSVP--RLFISTRLGTEEISPRVLQS 894
PY---EFFSEENAPKWRGL----LVPALKKVQGQVHPTL--ESNDDALQYVEE------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -SSLSDSLFVLHVQREDNKQK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        20037
                                                                                    Similarity
                                                                                                                                                                                   amino acid
                                                                                                                                                                                                    1319 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        E: SUGHRUE, MION, ZINN, MACPEAK & 2100 PENNSYLVANIA AVENUE, N.W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BOWTELL,
                                                                                                                                                                                                                                                                     : (202) 293-70
(202) 293-7860
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       USA
                                                                    Conservative
                                                                                                                                                                   linear
                                                                                  2.3%;
18.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         David Douglas Lawrence
DNA MOLECULES ENCODING N
SON OF SEVENLESS (mSOS)
AND mSOS POLYPEPTIDES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US/08290731C
                                                                                                                                                                                                                                                                                                                                                                                                      PL0921/92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US/08/290,731C
                                                                 170;
                                                                                                                                                                                                                                      2:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             970
                                                                                                                                                                                                                                                                                                                       Q-36066
                                                                 Score 122.5; DE Pred. No. 0.045; 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -EASELLRELCMKNMVWKYCRSI--SPEWK-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Version
                                                                                                  DB 2;
                                                                   359;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         #1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MURINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEAS
                                                                                                  Length 1319;
                                                                 Indels
                                                                 425;
                                                               Gaps
 50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               849
```

		2	
940 991	EEISPRVLQSLGSEPIQYAVPVVKYDRKGYKPRPRQLLLTPSAVVIVEDAKVKQRI	885 941	
884 940	SPEWKQGLQOKAVASEIFKGKKDNY	845 881	
844 880	ALR	820 821	
819 820	NAFFLDHVRASFLLNLRRQLPRNVLDTSWPTPPP::::::::::::::::::::::::::::	786 761	
785 760	QTIRRLIRGFILRHSPRCPE 	740 706	
739 705	GRTKIEIREPKTLEATEDSLEVRRQSLATKIQAAWRGEHW-RQKFLRVK	692 659	
691 658	MENLRVRRAGEAVRRKYEAFLQRYKSLCPETWDMWAGRPQDGVAVLVRHLGY-KPEEYKM :	610	
632 609	TVATQFKMSLLQLVEILRSKEPAYIRCIKPNDAKQPGRFDEVLIRHQVKYLGL	580 565	
579 564	LHYAGEVTYSVTGFLDKNNDLLFRNLKETMCSSMNPIMAQCFDKSELSDKKRPE	526 518	
525 517	ELEKLEDTVKPHPHELTHKLADQKTRKSLDRGEFRL :	482 476	
481 475	IELTLKSEQEEYEAEGIAWEPVQYFNNKIICDLVEEKFKGIISILDEECLR	431 419	
430 418	NRSLASKDAESPSWRSTTVLGLLDIY-GFEVFQHNSFEQFCINYCNE-KLQQLF :	379 361	
378 360	DALFTWLVRKI	360 301	
359 300	QLKYLTRLLG-VEGTTLREALTHRKIIAKGEELLSPLNLE-QAAYAR :: :	315 241	
314 240	HLGNIHFAADEDSNAQVTTEN	294 184	
293 183	ERNPQSYLYLVKGQCAKVSSINDKSDWKVMRKALSVIDFTEDEVEDLLSIVASVL : :	239 147	
238 146	QFDFKGAPVGGHILSYLLEKSRVVHQNHGERNFHVFYQLLEGGEEETLRRIGL	101	
185 100	ATKRILQFYAETCPA-PERGGAVRDRILQSNPVLE-AFGNAKTLRNDNSSREGKYMDV	130 51	

Q

д 0

B 8

δ

941 DYANLTGISV-SSLSDSLFVLHVQREDNKQK 970

gg dg

B 6

04 07 07 07 07

Db 992 ENLNPMGNSMEKEFTDYLFNKSLEIEPRHPK 1022

Search completed: December 9, 2002, 16:48:40 Job time : 37~secs

```
Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Run
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      OM protein -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Maximum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Minimum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Searched:
                                                                                                                                                                                                                                                                                                         ŏ
                                                                                                                                                                                                                                                                                                                                                                             and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                        Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed.
                                                                                                                                                                                                                                                          1261.5
1240
    1186
568
566
497
215.5
207.5
150.5
1150.5
1144.5
1144.5
1144.5
1144.5
1144.5
                                                                                                                                                                                                                                                                                                      Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-09-893-371-1
5398
1 MRVF
                                                                                                                                                                                                                                                                                                                                                                                                                                       Published_Applications_Aa:*

1: /cgn2_6/ptodata/2/pubpaa/U;

2: /cgn2_6/ptodata/2/pubpaa/U;

3: /cgn2_6/ptodata/2/pubpaa/U;

4: /cgn2_6/ptodata/2/pubpaa/U;

5: /cgn2_6/ptodata/2/pubpaa/U;

6: /cgn2_6/ptodata/2/pubpaa/U;

6: /cgn2_6/ptodata/2/pubpaa/U;

6: /cgn2_6/ptodata/2/pubpaa/U;

7: /cgn2_6/ptodata/2/pubpaa/U;

9: /cgn2_6/ptodata/2/pubpaa/U;

10: /cgn2_6/ptodata/2/pubpaa/U;

11: /cgn2_6/ptodata/2/pubpaa/U;

12: /cgn2_6/ptodata/2/pubpaa/U;

13: /cgn2_6/ptodata/2/pubpaa/U;

14: /cgn2_6/ptodata/2/pubpaa/U;

15: /cgn2_6/ptodata/2/pubpaa/U;

16: /cgn2_6/ptodata/2/pubpaa/U;

17: /cgn2_6/ptodata/2/pubpaa/U;

18: /cgn2_6/ptodata/2/pubpaa/U;

19: /cgn2_6/ptodata/2/pubpaa/U;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            length: 0
length: 2000000000
                                                                                                                                                                                                                                                                                                      Query
Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       103943 segs, 16242309 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          December
    : /cgn2_6/ptodata/2/pubpaa/US07_PUBCOMB.pep:*
: /cgn2_6/ptodata/2/pubpaa/PCTUS_PUBCOMB.pep:*
: /cgn2_6/ptodata/2/pubpaa/US09_PUBCOMB.pep:*
: /cgn2_6/ptodata/2/pubpaa/US09_NEW_PUB.pep:*
0: /cgn2_6/ptodata/2/pubpaa/US09_PUBCOMB.pep:*
1: /cgn2_6/ptodata/2/pubpaa/US10_NEW_PUB.pep:*
2: /cgn2_6/ptodata/2/pubpaa/US10_NEW_PUB.pep:*
3: /cgn2_6/ptodata/2/pubpaa/US10_NEW_PUB.pep:*
4: /cgn2_6/ptodata/2/pubpaa/US0_NEW_PUB.pep:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MRYRASALGSDGVRVTMESA.....LITKAKNGHLAVVAPRLNSR 1044
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Copyright
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /cgn2_6/ptodata/2/pubpaa/USO8_NEW_PUB.pep:*
/cgn2_6/ptodata/2/pubpaa/PCT_NEW_PUB.pep:*
/cgn2_6/ptodata/2/pubpaa/USO6_NEW_PUB.pep:*
/cgn2_6/ptodata/2/pubpaa/USO6_PUBCOMB.pep:*
/cgn2_6/ptodata/2/pubpaa/USO6_NEW_PUB.pep:*
/cgn2_6/ptodata/2/pubpaa/USO6_NEW_PUB.pep:*
                                                                                                                                                                                                                                                                                                      Length DB
   1337
100
102
134
89
103
103
                                                                                                        2548
245
570
2568
2568
296
237
103
103
103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9, 2002, 16:47:51; Search time 20 Seconds (without alignments) 847.849 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GenCore version 5.1.3 (c) 1993 - 2002 Compugen Ltd
      US-09-925-302-686

US-09-764-853-551

US-09-866-108-3

US-09-925-301-923

US-09-925-301-923

US-09-925-299-937

US-09-864-761-4261

US-09-864-761-48341

US-09-864-761-48341

US-09-864-761-41762

US-09-864-761-41762

US-09-864-761-41891

US-09-864-761-42606
                                                                                                                                                                                                                                                                                                       ij
                                                                                                                                                                                                                            US-09-925-300-1583
US-09-851-682A-1
                                                                                                                                                                                                                                                          US-10-044-303-2
US-10-044-303-1
                                                                                                                                                                                                                                                                                                                                                 SUMMARIES
                                                                                                                                                                                                                                                                                                  Description
                            Sequence.
                                                         Sequence
Sequence
Sequence
Sequence
                                                                                                                                   Sequence
Sequence
                                                                                                                     Sequence
                                                                                                                                                                 Sequence
                                                                                                                                                                               Sequence
                                                                                                                                                                                              Sequence
                                                                                                                                                                                                            Sequence
                                                                                                                                                                                                                            Sequence
                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                        Sequence
               12. Appli
1583, Appli
1583, Appli
1686, Appli
551, Appli
551, Appli
937, Appli
34208, Appli
341932, A
```

	45	44	43	42	41	40	39	38	37	36	3 5	34	ω ω	32	31	30	29	28	27	26	25	24	23	22	21	20
	115.5	115.5	115.5	115.5	115.5	11.7	117	117	119	120.5	120.5	121	122	122	122	122	122	122	122.5	123.5	123.5	125	129.5	130	130.5	133.5
	2.1	2.1		2.1		2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.4	2.4	2.5
	2180	2180	1288	1288	1288	2053	1216	52	44	954	844	30	826	826	826	826	826	78	2139	2054	1958	29	57	1216	66	1045
	10	9	10	10	9	9	10	10	10	10	9	10	12	10	10	9	9	10	10	12	12	10	10	10	10	10
	· US-09-736-969A-96	US-09-736-968A-110	US-09-736-960-13	US-09-736-969A-13	US-09-736-968A-13	US-10-017-216-2	US-09-815-242-13698	US-09-864-761-38637	US-09-864-761-37176	US-09-815-242-11238	US-10-055-364-40	US-09-864-761-42566	US-10-028-158-23	US-09-833-790-235	US-09-922-958-4	US-09-902-941-330	US-09-736-457-330	US-09-864-761-42178	US-09-727-384-6	US-10-028-946-2	US-10-028-946-4	US-09-864-761-47524	US-09-864-761-40482	US-09-815-242-13312	US-09-864-761-42111	US-09-815-242-10617
•,	Sequence 96, Appl	Sequence 110, App	Sequence 13, Appl	Sequence 13, Appl	Sequence 13, Appl	Sequence 2, Appli	Sequence 13698, A	Sequence 38637, A	Sequence 37176, A	Sequence 11238, A	Sequence 40, Appl	Sequence 42566, A	Sequence 23, Appl	Sequence 235, App	Sequence 4, Appli	Sequence 330, App	Sequence 330, App	Sequence 42178, A	Sequence 6, Appli	Sequence 2, Appli	Sequence 4, Appli	Sequence 47524, A		Sequence 13312, A	•	Sequence 10617, A

ALIGNMENTS

```
δŏ
                                                                                               Вb
                                                                                                                                          Qy
                                                                                                                                                                                            Вр
                                                                                                                                                                                                                                       Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-10-044-303-2

; Sequence 2, Application US/10044303

; Patent No. US20020137161A1
                                                                                                                                                                                                                                                                                                                                                                                         US-10-044-303-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GENERAL INFORMATION:
APPLICANT: Max-Planck-Gesellschaft e.V.
TITLE OF INVENTION: Protein expression and structure solution using
TITLE OF INVENTION: specific fusion vectors
                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity
Matches 297; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQ ID NO 2
LENGTH: 1016
                                                                                                                                                                                                                                                                                                                                                                                                              OTHER INFORMATION: OTHER INFORMATION: OTHER INFORMATION: EOTHER INFORMATION: EOTHER INFORMATION: E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CURRENT APPLICATION NUMBER: US/10/044,303
CURRENT FILING DATE: 2002-01-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILE REFERENCE: ST010209-EPA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOFTWARE: PatentIn Ver. 2.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NUMBER OF SEQ ID NOS: 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURE: OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LENGTH: 10
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM: Artificial Sequence
210 NGSGVLEQQILQANPILEAFGNAKTTRNNNSSRFGKFIEIQFNSAGFISGASIQSYLLEK
                                                                                                                                                                                       91 GVEDMSEL-SYLNEPAVFHNLRVRYNQDLIYTYSGLFLVAVNPFKRIPIYTQEMVDIFKG 149
                                                                                                                                                                                                                      28 GVQDEVLLENFTSEAAFIENLRRRFRENLIYTYIGPVLVSVNPYRDLQIYSRQHMERYRG 87
                           GGA--VRDRLLQSNPVLEAFGNAKTLRNDNSSRFGKYMDVQFDFKGAPVGGHILSYLLEK 205
                                                                                             VSFYEVPPHLFAVADTVYRALRTERRDQAVMISGESGAGKTEATKRLLQFYAETCPAPER 147
                                                                                                                                                                                                                                                                                       Conservative 181; Mismatches 322;
                                                                                                                                                                                                                                                                                                                                                                                                        The protein comprises as component (1) the aa sequence of myosin II motor domain of Dictyostelium, a three aa linker region and that a-actinin aa sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Description of Artificial Sequence: Whole sequence of recombinant protein M761-2R R238 E
                                                                                                                                                                                                                                                                                                                23.4%; Score 1261.5; DB 12; Length 1016; 34.3%; Pred. No. 4.3e-91;
                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                       19;
```

Sequence

12;

```
OTHER INFORMATION: D
OTHER INFORMATION: S
OTHER INFORMATION: r
US-10-044-303-1
                                                                                                                       Sequence 1, Application US/10044303

Patent No. US20020137161A1

GENERAL INFORMATION:
APPLICANT: Max-Planck-Gesellschaft e.v.
TITLE OF INVENTION: Protein expression and structure sol.
TITLE OF INVENTION: Specific fusion vectors
FILE REFERENCE: ST010209-EpA
CURRENT APPLICATION NUMBER: US/10/044,303
CURRENT FILING DATE: 2002-01-11
SOFTWARE: Patentin Ver. 2.1
LENGTH: 765
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                             US-10-044-303-1
                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                               ORGANISM: Artificial Sequence FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                    896 NRIL----KKLENWATTKSVYLGSNE 917
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        836
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    796
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 778
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              740
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              732 KHLNIDDEQYREGITKIFFRAGQ-LARIEEAREQRLGSEQTKSD------YLK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       673
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                613
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               564
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           446 GIAWEPVQY-FNNKIICDLVE-EKFKGIISILDEECLRPGEATDLTELEKLEDTVKPHPH 503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 389 NPSVLEKALMEPRILAGRDLVAQHLNVEKSSSSRDALVKALYGRLFLWLVKKINNVLCQE
                                                                                                                                                                                                                                                                                                                                                                                                                                CRSISPEWKQQLQQKAVASEIFKGKKD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SFLLNLR-----RQLPRNVLDTSWPTPPPALREASELLR-ELCMKN----MVWKY
                                                                                                                                                                                                                                                                                                                                                                                                                                                        SLQTKLRLIKREPFVAPAGLTPNEIDSTWSALEKAEQEHAEALRIELKRQKKIAVLLQKY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RANELVQ--WINDKQASLESRDFGDSIESVQSFMNAHKEYKKTEKPPKGQEVSELEAIYN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RSAICIQSWW----RGTLGRRKAAKRKWAAQTIRRLIRGFILRHSPRCPENAFFLDHVRA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RHLGYKPEEYKMGRTKIFIRFPKTLFATEDSLEVRROSLATKIQAAWRGFHWRQKFLRVK 739
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FLTHKLADOKTRKSLDRGEFRLLHYAGEVTYSVTGFLDKNNDLLFRNLKETMCSSMNPIM 563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DKYVLDQLRCNGVLEGIRITRKGFPNRIIYADFVKRYYLLAPNV-PRDAEDSQKATDAVL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EVLIRHOVKYLGLMENLRVRRAGFAYRRKYEAFLQRYKSLCPETWPMWAGRPQDGVAVLV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TKLENDPNIASRAKKGANFITVAAQYKEQLASLMATLETTNPHFVRCIIPNNKQLPAKLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AQCEDKSELSDKKRPE----TVATQFKMSLLQLVETLRSKEPAYTRCIKPNDAKQPGRED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KINWTFIDFGLDSQATIDLIDGRQPPGILALLDEQSVFP-NATDNTLITKL-----HSH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -----RKAYFIGVLDISGFEIFKVNSFEQLCINYTNEKLQQFFNHHMFKLEQEEYLKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EGTTLREALTHRKIIAKGEELLSPLNLEQAAYARDALAKAVYSRTFTWLVRKINRSLASK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KITRQAMDIVGFSQEEQMSIFKIIAGILHLGNIKFEKGAGEGAVLKDKTALNAASTVFGV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KVMRKALSVIDFTEDEVEDLLSIVASVLHLGNIHFAADEDSNAQVTTENQLKYLTRLLGV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SRVVFQSETERNYHIFYQLLAGATAEEKKALHL-AGPESFNYLNQSGCVDIKGVSDSEEF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SRVVHQNHGERNEHVFYQLLEGGEEETLRRLGLERNPQSYLYLVKGQCAKVSSINDKSDW
                                        Description of Artificial Sequence: Partial sequence of Dictyostellum; Component (1) of recombinant protein M761-2R R238E
      23.0%;
 Score 1240;
                                                                                                                                                                                                                                                                                                                                                                                                                                   867
 DΒ
 12;
Length 765;
                                                                                                                                                                                                                                                       solution using
                                                        myosin
the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       840
                                                                                                                                                                                                                                                                                                                                                                                                                                                          895
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    835
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 795
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         731
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    672
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  619
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            554
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    448
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              388
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       328
```

```
FILE REFERENCE: PAIO1
CURRENT APPLICATION NUMBER: US/09/925,300
CURRENT FILING DATE: 2001-08-10
PRIOR APPLICATION NUMBER: PCT/US00/05988
PRIOR FILING DATE: 2000-03-08
PRIOR APPLICATION NUMBER: 60/124,270
PRIOR FILING DATE: 1999-03-12
NUMBER OF SEQ ID NOS: 1890
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 1583
LENGTH: 569
                                                                                                                                                                                                                                                                RESULT 3
US-09-925-300-1583
; Sequence 1583, Application US/09925300
; Patent No. US20020151681A1
                                                                                                                                                                                                                                                                                                                                                                                                                        20
                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ър
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Вр
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                γ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DЪ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DЪ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Qy
                                                                                                                                                                                                       APPLICANT: Steve Ruben
TITLE OF INVENTION: Nucleic Acids, Proteins
                                                                                                                                                                                                                                  APPLICANT: Craig Rosen, APPLICANT: Steve Ruber
 ORGANISM: Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best Local Similarity 38.1%; pred. No. 1.4e-89; Matches 265; Conservative 154; Mismatches 248;
                                                                                                                                                                                                                                                                                                                                                                               732 KHLNIDPEQYRFGITKIFFRAGQ-LARIEEAREQR 765
                                                                                                                                                                                                                                                                                                                                                                                                                           680
                                                                                                                                                                                                                                                                                                                                                                                                                                                             673
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             613
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             564
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               502 KINWTFIDFGLDSQATIDLIDGRQPPGILALLDEQSVFP-NATDNTLITKL-----HSH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              446 GIAWEPVQY-FNNKIICDLVE-EKFKGIISILDEECLRPGEATDLTFLEKLEDTVKPHPH 503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                449
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       266 KVMRKALSVIDFTEDEVEDLLSIVASVLHLGNIHFAADEDSNAQVTTENQLKYLTRLLGV 325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      91
                                                                                                                                                                                                                                                                                                                                                                                                        RHLGYKPEEYKMGRTKIFIRFPKTLFATEDSLEVR
                                                                                                                                                                                                                                                                                                                                                                                                                                             DKVVLDQLRCNGVLEGIRITRKGFPNRIIYADFVKRYYLLAPNV-PRDAEDSQKATDAVL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EVLIRHQVKYLGIMENLRVRRAGFAYRRKYEAFLQRYKSLCPETWPMWAGRPQDGVAVLV 679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TKLENDPNIASRAKKGANFITVAAQYKEQLASLMATLETTNPHFVRCIIPNNKQLPAKLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AQCFDKSELSDKKRPE----TVATQFKMSLLQLVEILRSKEPAYIRCIKPNDAKQPGRFD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FSKKNAKYEEPRFS--KTEFGYTHYAGQVMYEIQDWLEKNKDPLQQDLELCFKDSSDNVV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DAESPSWRSTTVLGLLDIYGFEVFQHNSFEQFCINYCNEKLQQLFIELTLKSEQBEYEAE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -----RKAYFIGVLDISGFEIFKVNSFEQLCINYTNEKLQQFFNHHMFKLEQEEYLKE 501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NPSVLEKALMEPRILAGRDLVAQHLNVEKSSSSRDALVKALYGRLFLWLVKKINNVLCQE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EGTTLREALTHRKIIAKGEELLSPLNLEQAAYARDALAKAVYSRTFTWLVRKINRSLASK 385
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KITRQAMDIVGFSQEEQMSIFKIIAGILHLGNIKFEKGAGEGAVLKDKTALNAASTVFGV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SRVVFQSETERNYHIFYQLLAGATAEEKKALHL-AGPESFNYLNQSGCVDIKGVSDSEEF 328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SRVVHQNHGERNFHVFYQLLEGGEEETLRRLGLERNPQSYLYLVKGQCAKVSSINDKSDW 265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RRRNEVAPHIFAISDVAYRSMLDDRQNQSLLITGESGAGKTENTKKVIQYLASVAGRNQA 209
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GVEDMSEL-SYLNEPAVFHNLRVRYNQDLIYTYSGLFLVAVNPFKRIPIYTQEMVDIFKG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GVQDFVLLENFTSEAAFIENLRRRFRENLIYTYIGFVLVSVNPYRDLQIYSRQHMERYRG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NGSGVLEQQILQANPILEAFGNAKTTRNNNSSRFGKFIEIQFNSAGFISGASIQSYLLEK 269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGA--VRDRLLQSNPVLEAFGNAKTLRNDNSSRFGKYMDVQFDFKGAPVGGHILSYLLEK 205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VSFYEVPPHLFAVADTVYRALRTERRDQAVMISGESGAGKTEATKRLLQFYAETCPAPER 147
sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                 714
                                                                                                                                                                                                              and
                                                                                                                                                                                                              Antibodies
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            28;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               672
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               619
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               612
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                448
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  388
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          87
```

```
Ş
                                                    ₽
                                                                        ρ
                                                                                                      В
                                                                                                                              Š
                                                                                                                                                          В
                                                                                                                                                                               οy
                                                                                                                                                                                                             В
                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                             οy
                                                                                                                                                                                                                                                                                                                                                                       멍
                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                           Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; OTHER INFORMATION: US-09-925-300-1583
 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LOCATION: (553)
OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME/KEY: SITE
LOCATION: (554)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME/KEY: SITE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NAME/KEY: SITE
LOCATION: (552)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 OTHER INFORMATION: Xaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NAME/KEY: SITE
LOCATION: (346)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LOCATION: (345)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NAME/KEY: SITE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME/KEY: SITE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LOCATION: (34)
OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NAME/KEY: SITE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LOCATION: (2)
OTHER INFORMATION: Xaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LOCATION: (188)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME/KEY: SITE
                                                    443
                                                                              697
                                                                                                                                637
                                                                                                                                                          323
                                                                                                                                                                                     577
                                                                                                                                                                                                                                       519
                                                                                                                                                                                                                                                                   203
                                                                                                                                                                                                                                                                                          461
                                                                                                                                                                                                                                                                                                                    143
                                                                                                                                                                                                                                                                                                                                              401
                                                                                                                                                                                                                                                                                                                                                                                                 341
                                                                                                                                                                                                                                                                                                                                                                                                                                         503
                           757
                                                                                                        383
                                                                                                                                                                                                               263
                                                                                                                                                                                                                                                                                                                                                                        88
                                                                                                                                                                                                                                                                                                                                                                                                                           28
RYQQTKSSALVIQSYIRGWKARKILRELKHQKRCKE 538
                                                                    FIRFPKTLFATEDSLEVRRQSLATKIQAAWRGFHWRQKFLRVKRSAICIQSWWRGTLGRR 756
                                                                                                  RPETVATQFKMSLLQLVEILRSKEPAYIRCIKPNDAKQPGRFDEVLIRHQVKYLGLMENL
                                                                                                                                                                                                             PHSCFRIQHYAGKVLYQVEGFVDKNNDLXYRDLSQAMWKASHALIKSLFPEGNPAKINLK
                                                                                                                                                                                                                                                                               CDLVEEKFKGIISILDEECLRPGEATDLTFLEKLEDTVKPHPHFLTH--KLADQKTRKSL
                                                                                                                                                                                                                                                                                                                                LDIYGFEVFQHNSFEQFCINYCNEKLQQLFIELTLKSEQEEYEAEGIAWEPVQYFNNKII 460
                                                                                                                                                                                                                                                                                                                                                                       AKQEKVSTTLNVAQAYYARDALAKNLYSRLFSWLVNRINESIKAQTKVRKK-----VMGV 142
                                                                                                                                                                                                                                                                                                                                                                                       AKGEELLSPLNLEQAAYARDALAKAYYSRTFTWLVRKINRSLASKDAESPSWRSTTVLGL 400
                                                                                                                                                                                                                                                                                                                                                                                                                           VLAVVAXVLKLGNIEFKPESRVNGLDESKIKDKNELKEICELTGIDQSVLERAFSFRTVE 87
                        KAAKRKWAAQTIRRLIRGF-----ILRHSPRCPE 785
                                                  FIRNPRTLEKLEDLRKQRLEDLATLIQKIYRGWKCRTHFLLMKKSQIVIAAWYRRYAQQK
                                                                                                                               RVRRAGFAYRRKYEAFLQRYKSLCPETWPMWAGRPQDGVAVLVRHLGYKPEEYKMGRTKI 696
                                                                                                                                                                                                                                     DRGEFRLLHYAGEVTYSVTGFLDKNNDLLFRNLKETMCSSMNPIMAQCFDKSELS--DKK 576
                                                                                                                                                                                                                                                                CDLIENNTNGILAMLDEECLRPGTVTDETFLEKLNQVCATHQHFESRMSKCSRFLNDTSL
                                                                                                                                                                                                                                                                                                                    LDIYGFEIFEDNSFEQFIINYCNEKLQQIFIELTLKEEQEEYIREXIEWTHIDYFNNAII
                                                                                                                                                          RPPTAGSQFKASVATLMKNLQTXXPNYIRCIKPNDKKAAHIFNEALVCHQIRYLGLLENV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               243;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (291)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Xaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Xaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Xaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Xaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Xaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Xaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Xaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          22.0%;
47.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           equals any of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   equals
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           equals
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                equals any of the naturally occurring L-amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        equals
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             equals
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   equals
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          equals
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 equals
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              86;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 1186; DB 10;
Pred. No. 1.6e-85;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  any of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           any of the naturally
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      any of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             any of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   any of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          any
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                any of the naturally occurring L-amino
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           naturally occurring L-amino
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      naturally occurring
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             naturally occurring
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                naturally occurring
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   naturally
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        naturally occurring
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              167;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 569;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   occurring
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          occurring
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          L-amino
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             L-amino
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        L-amino
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   L-amino
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     L-amino
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           L-amino
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                    202
                                                                                                      442
                                                                                                                                                          382
                                                                                                                                                                                   636
                                                                                                                                                                                                               322
                                                                                                                                                                                                                                                                 262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5
```

RESULT 4 US-09-851-682A-1

```
; ORGANISM: Homo sapier US-09-851-682A-1
   Вþ
                                                      Š
                                                                                                                      В
                                                                                                                                                                            Qy
                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                  Qy
                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
APPLICANT: Adams, Arwen
APPLICANT: Chiu, Choi y
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOFTWARE: FastSEQ for Windows Version 3.0 SEQ ID NO 1 LENGTH: 2548
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 1, Application US/09851682A Patent No. US20020091248A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Sheffield, Val
APPLICANT: Welch, Juliet
TITLE OF INVENTION: MYOSIN IXA AND CYCLIC NUCLEOTIDE GATED
TITLE OF INVENTION: CHANNEL-15 (CNGC-15) POLYNUCLEOTIDES, POLYNUCL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                         572
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            378
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        454
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              158
                                                               560
                                                                                                                                                                                                                                                                                                            497
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  394
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100
   740
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity
les 320; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NDKSDWKVMRKALSVIDFTEDEVEDLLSIVASVLHLGNIHFAAD--EDSNAQVTTENQLK 317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VADVAYHAMLQRKKNQCIVISGESGSGKTQSTNFLIH----HLTALSQKGFASGVEQIILG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VADTYYRALRTERRDQAVMISGESGAGKTEATKRLLQFYAETCPAPERGGA--VRDRLLQ 157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NEKTILENLRDREKHEKIYTYVGSILIVINPEKFLPIYNPKYVKMYDNHQLGKPEPHIYA 217
                                                                                                                      LRSSKNAFISGMIGIDPVAVFRWAILRAFFRAMVAFREAGKRNIHRKTGHDDTAPCAILK 739
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        YLTRLLGVEGTTLREALTHRKIIAKGEELLSPLNLEQAAYARDALAKAVYSRTFTWLVRK 377
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FHVFYQLLEGGEEETLRRLGLERNPQSYLYL-------VKGQCAKVSSI 259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGPVLEAFGNAKTAHNNNSSRFGKFIQVNYQETGTVLGAYVEKYLLEKSRLVYQEHNERN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SNPVLEAFGNAKTLRNDNSSRFGKYMDVQFDFKGAPVGGHILSYLLEKSRVVHQNHGERN
: ||||||||||
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEAAFIENLRRRFRENLIYTYIGPVLVSVNPYRDLQIYSRQHMERYRGVSFYEVPPHLFA 99
SMDSFSFLQHPVHQRSLEILQRCKEEKYSITRKNPRTPLSDLQGMNALNEKNQHDTFDIA 799
                                                                                                                                                                                                                                                                                                                                                                     LEQEEYRTEGISWHNIDYIDNTCCINLISKKPTGLLHLLDEESNFP-QATNQTLLDKFK-
                                                                                                                                                                                                                                                                                                                                                                                                     SEQEEYEAEGIAWEPVQYFNNKIICDLVEEKFKGIISILDEECLRPGEATDLTFLEKLED 496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     IVSELLEVKEEMLFEALVTRKTVTVGEKLILPYKLAEAVTVRNSMAKSLYSALEDWIVFR 513
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DLRHDFERLQLAMEMVGFLPKTRRQIFSLLSAILHLGNICYKKKTYRDDSIDICNPEVLP 453
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     YHVFYYLLAGASEDERSAFHL-KQPEEYHYLNQITKKPLRQSWDDYCYDSEPDCFTVEGE 393
                                                                                                                                                                                  FRNLKETMCSSM---
                                                                                                                                                                                                                                               -----HQHEDNSYIEFPAVMEPAFIIKHYAGKVKYGVKDFREKNTDHMRPDIVAL
                                                                                                                                                                                                                                                                                                            TVKPHPHFLTHKLADQKTRK--SLDRGEFRLLHYAGEVTYSVTGFLDKNND------LL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Du...
Gorman, sur
Song
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Chiu, Choi Ying
Duhl, David
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              20.5%; scilarity 25.2%; Pr
Conservative 205;
                                                               -NP----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Susan W
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 1105; DB 10;
Pred. No. 3.9e-78;
5; Mismatches 370;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 2548;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels 376;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                POLYPEPTIDES
                                                         - FD--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        217
                                                                                                                                                                                                                                               679
                                                                                                                                                                                                                                                                                                         547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              334
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    274
                                                                                                                                                                                      559
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    32;
```

```
CURRENT APPLICATION NUMBER: US/09/925,302
CURRENT APPLICATION NUMBER: D01-08-10
PRIOR APPLICATION NUMBER: PCT/US00/05918
PRIOR FILING DATE: 2000-03-08
PRIOR APPLICATION NUMBER: 60/124,270
PRIOR FILING DATE: 1999-03-12
NUMBER OF SEQ ID NOS: 896
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 686
LENGTH: 245
                                              US-09-925-302-686
                                                                                                                                                                                                                                                                                                                                                                                                               US-09-925-302-686
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 дь
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             дb
               Query Match
                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
APPLICANT: Rosen et al.
TITLE OF INVENTION: Nucleic Acids, Proteins and
FILE REFERENCE: PA104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               õ
                                                                                                                                                                                                                                                                                                                                                                            Sequence 686, Application US/09925302
Patent No. US20020044941A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             р
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ₽
                                                       NAME/KEY: SITE
LOCATION: (145)
OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                 ORGANISM: Homo sapiens
                                                                                                               FEATURE:
                                                                                                                                              TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1346 SVISDEGDLOF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1214 ESNRISRESSYDCLKESPNKQQERAQSQSGVDL---QED------VLVRER------ 1255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        996 NININGGSITE 1006
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1156 QRFKALKEQRLRETKPEVG--LVNIKGYGSLEIQGSDPSEWEDCSFDNRIKAIEECKSVI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1096 ELRAAAIVIQOKWRDYYRRRHMAAICIQARWKAYRESKRYQEQRKKIILLOSTCRGFRAR 1155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1036 ROHFLHLRQASVIIQREWRNYLNQKQVRDAAVQKDAFVMASAAALLQASWRAHLERQRYL 1095
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              688
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  829 RELCMKNMVWKYCRSISPEWKOOLOOKAVASEIFKGKKDNYPOSVPRLFISTRLGTEEIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        611 DAKQPGREDEVLIRHQVKYLGLMENLRVRRAGEAYRRKYEAFLQRYKSLCPETWPMWAGR 670
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               920
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      800 WNGRTGIRQSRLSSGTSLLDKDGIFANSTSSKLLERAHGILTRNKNFKSKPALPKHLLEV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SPS-----EDRRWSTELVPEGLOSPRGTPDSESSQGSLELLSYEESQKSKLE 1345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SVSSLSDSLFVLHVQREDNKQKGDVV---LQSDH-----VIETLTKTALSADRVN 995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRSLEDLHQKKVGRA------KRESRRMRELEQAIFSLELLKVR-----SLGGI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRVLQSLGSEPIQYAVPVVKYDRKGYKPRPRQLLLTPSAVVIVEDAKVKQRIDYANLTGI 948
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  HSPRC-----PENAFFLDHVRASFLLNLRRQLPRNVLDTSWPTPPPALREASELL 828
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RVKRSAICIOSWWRGTLGRRKAA----KRKWAA------QTIRRLI------RGFILR 778
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TEDSLEVRROSL-----736
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AEKLPLRFSDVLVLRQLRYTGMLETVQIRQSGYSSKYSFQDFVSHFHVLLFRNIIPSKFN 979
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             IQD----FFRKINLNPDNYQVGKTMVFLKEQERQHLQDLLHQEVLRRIILLQRWFRVLLC 1035
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PODGVAVLVRHLGYKPEEYKNGRTKIFI--------REPKTLEA 706
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NSLKHLTRLTLQDRITKSLLHLHKKKKPPSISAQFQASLSKLMETLGQAEPYFVKCIRSN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      -----KKRPETVATOFKMSLLOLVEILRSKEPAYIRCIKPN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   -----KSELSD------
                                                 Xaa equals any of the
          10.5%;
   Score 568;
                                       naturally occurring L-amino acids
   DΒ
 10;
                                                                                                                                                                                                                                                                                                                         Antibodies
Length 245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         610
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        859
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       574
```

```
Qγ
                                                                    Ъ
                                                                                                  Ş
                                                                                                                                  В
                                                                                                                                                                Ωy
                                                                                                                                                                                                  В
                                                                                                                                                                                                                               ρ
                                                                                                                                                                                                                                                                  Бр
                                                                                                                                                                                                                                                                                             Qy
                                                                                                                                                                                                                                                                                                                              Ъ
                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                            DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                        δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; ORGANISM: Homo sapiens US-09-764-853-551
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 6
US-09-764-853-551
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 551, Application US/09764853
Patent NO. US20020090672A1
GENERAL INFORMATION:
APPLICANT: Rosen et al.
TITLE OF INVENTION: Nucleic Acids, Proteins, and
FILE REFREENCE: PJ206
CURRENT APPLICATION NUMBER: US/09/764,853
CURRENT FILING DATE: 2001-01-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DЪ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ρy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOFTWARE: PatentIn Ver.
SEQ ID NO 551
LENGTH: 570
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches 167;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Prior application data removed - consult PALM or file wrapper NUMBER OF SEQ ID NOS: 939
SOFTWARE: PatentIn Ver. 2.0
Best Local Similarity 52.1%; Properties 112; Conservative 33;
                                                359 AAAITGDSAEAMPAPMHCGRTKVFM-----TDSMLELLECGRARVLE-----
                                                                             674 GVAVLVRHLGYKPEEYKMGRTKIFIRFPKTLFATEDSLEVRROSLATKIQAAWRGFHWRQ
                                                                                                              299 SHRNEVERYKLLRRLHPCTSSGPDSPYPAKGLPEWCPHSEEATLBPLIQDILHTLPVLTQ
                                                                                                                                             648 KYEAFLQRYKSL-----C----PET-----WPMWAGRPQD------
                                                                                                                                                                                                       588 SLLQLVEILRSKEPAYIRCIKPNDAKQPGRFDEVLIRHQVKYLGLMENLRVRRAGFAYRR 647
                                                                                                                                                                                                                                          179 AGLVEKNKDPIPPELTRLLQQSQDPLLMGLFPTNPKEKTQEEPPGQSRAPVLTVVSKFKA 238
                                                                                                                                                                                                                                                                                                         129 CRLNRPSSAAQLQ--TRIETALAGSPCLGHNKLSREPS-----FIVVHYAGPVRYHT 178
                                                                                                                                                                                                                                                                                                                              479 CL--RPGEATDLTFLEKLEDTVKPHPHFLTHKLADQKTRKSLDRGEFRLLHYAGEVTVSV 536
                                                                                                                                                                                                                                                                                                                                                                                                                         419
                                                                                                                                                                                                                                                                                                                                                                                                                                                       359 RDALAKAVYSRTFTWLVRKINRSLASKDAESPSWRSTTVLGLLDIYGFEVFQHNSFEQFC 418
                                                                                                                                                                                                                                                                                                                                                                      69 INYANEKLOOHEVAHYLRAQQEEYAVEGLEWSFINYQDNQPCLDLIEGSDISICSLINEE
                                                                                                                                                                                                                                                                                                                                                                                                                                    14 RDCLAKLIYARLEDWLVSVINSSIC---ADTDSW--TTFIGLLDVYGFESFPDNSLEQLC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           122 PEGKLSITEVTKRPLTAATLEKNXMIALVDNLASKEPYYVRCIKPNDKKSPQIFDDERCR 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   568 DKSELS---DKKRPETVATQEKMSLLQLVEILRSKEPAYIRCIKPNDAKQPGREDEVLIR 624
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    508 KLADQKTRKSLDRGEFRLLHYAGEVTYSVTGFLDKNNDLLFRNLKETMCSSMNPIMAQCF 567
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    448 AWEPVQYFNNKIICDLVEEKFKGIISILDEECLRPGEATDLTFLEKLEDTVKPHPHFLTH 507
                                                                                                                                                                            SLEQLLQVLHSTTPHYIRCIKPNSQGQAQTFLQEEVLSQLEACGLVETIHISAAGFPIRV
                                                                                                                                                                                                                                                                         TGFLDKNNDLLFRNLKETMCSSMNPINAQCF--DKSELSDKKRPE----TVATQFKM 587
                                                                                                                                                                                                                                                                                                                                                                                                   INYCNEKLOOLFIELTIKSEOEEYEAEGIAWEPVOYFNNKIICDLVEEKFKGIISILDEE 478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                KLCASDKILEFDR-NFRIRHYAGDVVYSVIGFIDKNKDTLFQDFKRLMYNSSNPVLKNMW 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AWKHIDYFNNQIIVDLVEQQHKGIIAILDDACMNVGKVTDEMFLEALNSKLGKHAHFSSR 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      10.5%; Score 566; DB 10; 27.6%; Pred. No. 1.2e-36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            91;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pred. No. 2.2e-37;
3; Mismatches 66;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches 198;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Antibodies
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 570;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels 150;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                  792
                                                                                                                                              673
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                     89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  20;
```

Query Match 9.2%; Score 497; DB 10; Length 2568; Best Local Similarity 22.6%; Pred. No. 3.3e-30; Matches 266; Conservative 194; Mismatches 439; Indels 280; Gaps 51;			 PRIOR FILING DATE: 2001-02-05 NUMBER OF SEQ ID NOS: 15752 SOFTWARE: Aeomica Sequence Listing Engine SED ID NO 3 	APPLICATION N FILING DATE: APPLICATION N	PRIOR FILING DATE: 2001-01-30 PRIOR APPLICATION NUMBER: PCT/US01/00661 PRIOR FILING DATE: 2001-01-30 PRIOR APPLICATION NUMBER: PCT/US01/00670 PRIOR APPLICATION NUMBER: PCT/US01/00670	FILING DATE: 2001-0: APPLICATION NUMBER: FILING DATE: 2001-0: APPLICATION NUMBER:	FILING DATE: 2001-0: APPLICATION NUMBER: FILING DATE: 2001-0: APPLICATION NUMBER:	; PRIOR FILING DATE: 2001-01-30 ; PRIOR APPLICATION NUMBER: PCT/US01/00664 ; PRIOR FILING DATE: 2001-01-30 ; PRIOR APPLICATION NUMBER: PCT/US01/00669	FILING DATE: 2000-0: APPLICATION NUMBER: FILING DATE: 2001-0: APPLICATION NUMBER:	FILING DATE: 2000-05-20 APPLICATION NUMBER: GB FILING DATE: 2000-10-00 APPLICATION NUMBER: US	REFERENCE: AEOMICA-7 NIT APPLICATION NUMBER: US/09/866,108 NIT FILING DATE: 2001-05-25 APPLICATION NUMBER: US 60/207,456	RANK, David R. CHEN, Wensheng SHANNON, Mark NVENTION: MYOSIN	APPLICANT: APPLICANT: APPLICANT:	US-09-866-108-3 ; Sequence 3, Application US/09866108 ; Patent No. US2002048800A1 ; CENERAL INFORMATION	Db 516 GSFQRK 521	907		Db 441 IQKURI 460	Db 401KH 440 Oy 793 VRASFLLNLRROLPRNVLDTSWPTPPPALREASELLRELCMKNMVWKYCRSISPEWKQQL 852
	Db 1479 KSKHEQVQKKLGDVNKQ-LEEAQQKIQLNDLERDPTGGADEWQMRFDCAQMENEFLR 1534 OV 880 TRLGTEEISPRVLOSLGSEPIOYAVPVVKYDRKGYKPRPROLL 922	QY 828 LRELCMKNMVWKYCRSISPEWKQQLQQKAVASEIFKGKKDNYPQSVPRLFIS 879	Qy 773 RGFILRHSPRCPENAFFLDHVRASFLLNLRQLPRNVLDTSWPTPPPALREASEL 827 : : : : : :	KIRRLAAQCIQKNVAVFLAVKDWPWWQLLGSLQPLLSATIGTEQLRAKEEELTTLRRKLE	683 GYKPEEYKMGRTKIFIRFPKT : : : : : : : : : : : : : : : : : : :			Qy 558SMNPIMAQCFDKSELSDKKRPETVATQFKMSLLQLVEI 595	511 DOKTRKSLDRGEERLLHYAGEVTYSVTGELDKNNDLLFRNLKETMCS : :	Qy 466EKFKGIISILDEECLRPGEATDLTFLEKLEDTVKPHPHFLTHKLA 510 : : : : :: :: :: :: :: :: :: :: :: :: ::	Qy 417 FCINYCNEKLQQLFIELTLKSEQEEYEAEGIAWEPVQYFNNKIICDLVE 465	Qy 363 AKAVYSRTFTWLVRKINRSLASKDAESPSWRSTTVLGLLDIYGFEVFQHNSFEQ 416	Qy 317 KYLTRLLGVEGTTLREA-LTHRKIIAKGEELLSPLNLEQAAYARDAL 362	Qy 261 DKSDWKVMRKALSVIDFTEDEVEDLLSIVASVLHLGNIHFAADEDSNAQVTTENQL 316	OY 209 VHONHGERNFHVFYOLLEGGEEETLRRLGLERNPOSYLYLVKGOCAKVSSI 260	Db 687 RVSVEKIRATETVLRAFGSVSMAHSRSATRESMVMSLDENATGRITAAQLQTMLLEKSRV 746	631 GLPAHIGSMAQRAYWALLNQRRDQSIVALGRSGAGKTTTCCEQVLEHLVGMAGSVD-G	QY 89 SFYEVPPHLFAVADTVYRALRTERRDQAVMISGESGAGKTEATKRLLQFYAETCPAPERG 148	Qy 29 VQDEVLLENETSEAAFIENLRRRFRENLIYTYIGPVLVSVNPYRDLQIYSRQHMERYRGV 88

```
RESULT 9
US-09-925-299-937
Sequence 937, Application US/09925299
Patent No. US20020055627A1
GENERAL INFORMATION:
APPLICANT: Rosen et al.
TITLE OF INVENTION: Nucleic Acids, Proteins
FILE REFERENCE: PA102
                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   дЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
 CURRENT APPLICATION NUMBER: US/09/925,299
CURRENT FILING DATE: 2001-08-10
PRIOR APPLICATION NUMBER: PCT/US00/05883
PRIOR FILING DATE: 2000-03-08
PRIOR APPLICATION NUMBER: 60/124,270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; ORGANISM: Homo sapiens US-09-925-301-923
PRIOR FILING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 8
US-09-925-301-923
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOFTWARE: PatentIn Ver.
SEQ ID NO 923
LENGTH: 296
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: ROSEN et al.
TITLE OF INVENTION: Nucleic Acids, Proteins
FILE REFERENCE: PALO6
CURRENT APPLICATION NUMBER: US/09/925,301
CURRENT FILING DATE: 2001-08-10
PRIOR APPLICATION NUMBER: PCT/US00/05882
PRIOR FILING DATE: 2000-03-08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 923, Application US/09925301
Patent No. US20020052308A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION NUMBER: 60/124,270 PRIOR FILING DATE: 1999-03-12 NUMBER OF SEQ ID NOS: 1694
                                                                                                                                                                                                                                                                                                              1038 A 1038
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: PRT
                                                                                                                                                                                                                                                                                294 A 294
                                                                                                                                                                                                                                                                                                                                  242 LSQTKQKLNIEISDEFLVQFRQDKVCVKFIQGNQKNGSVP-
                                                                                                                                                                                                                                                                                                                                                          989 LSADRVN-NINI------NQGSITFAGGPGRDGIIDFTSGSELLITKAKNGHLAVV 1037
                                                                                                                                                                                                                                                                                                                                                                                              182 SGOIKSEVPLVDVTKVSMSSONDGFFAVHLKEGSEAASKGDFLFSSDHLIENATKLYRTT 241
                                                                                                                                                                                                                                                                                                                                                                                                                    933 DAKVKQRIDYANLTGISVSSLSDSLFVLHVQR-EDNKQKGDVVLQSDHVIETLTK---TA 988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 125 GAYL---EINKNPKYKKLKDAIEEKIIIAEVVNKINRANGKSTSRIFLLTNNNLLLADOK 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   879 STRLGTEEISD----RVLQSLGSEPIQYAVPVVKYDRKGYKPRPROLLLTPSAVVIVE-- 932
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                822
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         763 WAAQTIRRLIRGFILRHSPRCPENAFFLDHVRASFLLNLRRQLPR-NVLDTSWPTPPPAL 821
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1646 QQQLKQKEQEASQLKQQVEMLQDHKRELLGSPSLGENCV 1684
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1586
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 æ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         961 HVOREDNKO-----KGDVVLQSDHVIETLTKTALSADRV 994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LDSTH--KELKRIFHLWRCKKYRDQFTDQQKLIYEEKLEASELFKDKKALYPSSVGQPFQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REASELLRELCMKNMVM---KYCRSISPEWKQOLQQKAVASEIFKGKKDNYPQSVPRLFI 878
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WLGLKVRREYRKFFRANAGK-KTYEFTLQRIVQKYFLEMKNKMPSLSPIDKNWPSRPYLF 66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | : |::
| EDTCVLLENQOSRNHELEKKOKKFDLQLAQALGESVFEKGLREKVTQENTSVRWELGQL 1645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 80;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4.0%; Score 215.5; DB:
26.6%; Pred. No. 1.8e-09;
ative 55; Mismatches 12:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches 127; Indels
                                                                                                      and Antibodies
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                and Antibodies
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 296;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                39;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            12;
```

```
PRIOR APPLICATION NUMBER: US 60/236,359
PRIOR FILING DATE: 2000-09-27
PRIOR APPLICATION NUMBER: PCT/US01/00666
PRIOR FILING DATE: 2001-01-30
PRIOR APPLICATION NUMBER: PCT/US01/00667
PRIOR APPLICATION NUMBER: PCT/US01/00667
PRIOR APPLICATION NUMBER: PCT/US01/00664
PRIOR FILING DATE: 2001-01-30
PRIOR APPLICATION NUMBER: PCT/US01/00669
PRIOR APPLICATION NUMBER: PCT/US01/00669
PRIOR FILING DATE: 2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-09-864-761-34208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    д
                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: US 60/207, 456
PRIOR FILING DATE: 2000-05-26
PRIOR APPLICATION NUMBER: US 60/207, 456
PRIOR APPLICA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NAME/KEY: SITE
LOCATION: (79)
OTHER INFORMATION: Xaa equals any of the naturally occurring L-amino .
NAME/KEY: SITE
LOCATION: (85)
OTHER INFORMATION: Xaa equals any of the naturally occurring L-amino US-09-925-299-937
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 34208, Application Patent No. US20020048763A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Penn, Sharron G. APPLICANT: Rank, David R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUMBER OF SEQ ID NOS: 1556
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 937
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             147 ALQTIFNRWRASQLIKSIPASDLPQVRAKVAAVEMLKGQRADLGLQRAWEGNYLASKP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM: Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          827 LLRELCMKNMVWKYCRSISPEWKOOLOOKAVASEIFKGKK------DNYPOSVP 874
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              767 TIRRLIRGFILRHSDRCPENAFFLDHVRASFLLNLRRQLPRNVLDTSWPTPPPPALREASE 826
                                            FILING DATE:
                                                      APPLICATION NUMBER: PCT/US01/00668
                                                                                                  APPLICATION NUMBER: PCT/US01/00665
FILING DATE: 2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   649 YEAFLORYKSLCPETWPMWAGRPODGVAV--LVRHLGYKPEEYKMGRTKIFIRFPKTLFA 706
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            707 TEDSLEVRROSLATKIQAAWRGFHWRQKFLRVKRSAICIQSWWRGTLGRRKAAKRKWAAQ 766
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       62 LE---ELRAQMLI-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4 YEKFLHRYKMISEFTWPN-HDLPSDKEAVKKLIERCGFQ-DDVAYGKTKIFIRTPRTLFT 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local Similarity
es 70; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TIIRYYRRYKVK-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Rank, David R.
Hanzel, David K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                        2001-01-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ----SYIHEVARRFHGVKTMRDYGKHV---KWPSPPKVLRRFEE 146
PCT/US01/00663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US/09864761
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 207.5; DB : Pred. No. 5.4e-09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ----RIVLFLQXVWRGTXARMR-YKRTKAAL 97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     87;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           237;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              49;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9;
```

FO

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-09-864-761-41932
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 41932, Application US/09864761 Patent No. US20020048763A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQ ID NO 34208
                                                                                                                                                                                                                                                                                                                                                         TITLE OF INVENTION: HUMAN GENOME-DERIVED SINGLE EXON NUCLEIC ACID PROBES USEFUL FOR TITLE OF INVENTION: GENE EXPRESSION ANALYSIS BY MICROARRAY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WHICH FILING DATE: 2001-01-29 NUMBER OF SEQ ID NOS: 49117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR FILING DATE: 2001-01-30
PRIOR APPLICATION NUMBER: US 60/234,687
PRIOR FILING DATE: 2000-09-21
PRIOR APPLICATION NUMBER: US 09/608,408
                                                                                                                                                              PRIOR APPLICATION NUMBER: US 60/207, 456
PRIOR FILING DATE: 2000-05-26
PRIOR APPLICATION NUMBER: US 09/632,366
                                                                                                                                                                                                                                                                                          CURRENT APPLICATION NUMBER: US/09/864,761
CURRENT FILING DATE: 2001-05-23
                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                          PRIOR APPLICATION NUMBER: US 60/180,312 PRIOR FILING DATE: 2000-02-04
                                                                                                                                                                                                                                                                                                                                        FILE REFERENCE: Aeomica-X-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Penn, Sharron G.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         OTHER INFORMATION: EXPRESSED IN BONE MARROW, SIGNAL = 0.64 OTHER INFORMATION: EXPRESSED IN LUNG, SIGNAL = 0.96 OTHER INFORMATION: EXPRESSED IN BRAIN, SIGNAL = 0.71 OTHER INFORMATION: EXPRESSED IN BRAIN, SIGNAL = 1.1 OTHER INFORMATION: EXPRESSED IN HEART, SIGNAL = 1.1e+02 OTHER INFORMATION: SWISSPROT HIT: P13533, EVALUE 3.00e-56 OTHER INFORMATION: EST_HUMAN HIT: F00635.1, EVALUE 2.00e-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       OTHER INFORMATION:
OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     528
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             470 GIISILDEECLRPGEATDLTFLEKLEDTVKPHPHFLTHKLADQKTR--KSLDRGEFRLLH 527
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     56
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ω
               RILING DATE: 2000-08-03
APPLICATION NUMBER: GB 24263.6
FILING DATE: 2000-10-04
APPLICATION NUMBER: US 60/236,359
FILING DATE: 2000-09-27
APPLICATION NUMBER: PCT/US01/00666
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: US 09/774,203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: PCT/US01/00670 FILING DATE: 2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE: 2000-06-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: PCT/US01/00663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: FILING DATE: 2001-0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE:
FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              YAGEVTYSVTGFLDKNNDLLFRNLKETMCSSMNPIMAQCFDKSELSD 574
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     YAGTVDYNILGWLEKNKDPLNETVVALYQKSSLKLMATLESSYATAD 102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GIMSILEEECMFP-KATDMTFKAKLYD-----NHLGKSNNFQKPRNIKGKQEAHFSLIH 55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Annomax Sequence Listing Engine vers. 1.1
                                                                                                                                                                                                                                                                                                                                                                                                         Rank, David R.
Hanzel, David K.
Chen, Wensheng
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2001-01-30
  2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EXPRESSED IN PLACENTA, SIGNAL = 0.71

EXPRESSED IN BT474, SIGNAL = 4.6

EXPRESSED IN BONE MARROW, SIGNAL = 0.64

EXPRESSED IN LUG, SIGNAL = 0.96

EXPRESSED IN ADULT LIVER, SIGNAL = 0.71

EXPRESSED IN BRAIN, SIGNAL = 1.11

EXPRESSED IN HEART, SIGNAL = 1.11

EXPRESSED IN HEART, SIGNAL = 1.10+02

EXPRESSED IN HEART, SIGNAL = 1.10+02

EXPRESSED IN HEART, SIGNAL = 1.10+02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MAP TO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           38.38;
                                                                                                                                                                                                                                                                                        2001-05-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PCT/US01/00662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AL049829.2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 150.5; DB 1
Pred. No. 4.6e-05;
4; Mismatches 43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  43;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 103;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
```

```
; OTHER INFORMATION: MAP TO AL049829.3; OTHER INFORMATION: EXPRESSED IN BONE MARROW, SIGNAL = 1.7; OTHER INFORMATION: EXPRESSED IN HEART, SIGNAL = 69; OTHER INFORMATION: SWISSPROT HIT: P13533, EVALUE 3.00e-56; OTHER INFORMATION: EST_HUMAN HIT: F00635.1, EVALUE 3.00e-28 US-09-864-761-41932
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       QΥ
               CURRENT APPLICATION NUMBER: US/09/864,761
CURRENT FILING DATE: 2001-05-23
PRIOR APPLICATION NUMBER: US 60/180,312
PRIOR FILING DATE: 2000-02-04
PRIOR APPLICATION NUMBER: US 60/207,456
PRIOR APPLICATION NUMBER: US 60/207,456
PRIOR APPLICATION NUMBER: US 09/632,366
PRIOR APPLICATION NUMBER: US 60/236,359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-09-864-761-48341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                        GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 48341, Application US/09864761 Patent No. US20020048763A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity
Matches 41; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOFTWARE: Annomax Sequence Listing Engine vers. SEQ ID NO 41932
                                                                                                                                                                                                                                                                         APPLICANT: Rank, David R.
APPLICANT: Hanzel, David K.
APPLICANT: Chen, Wensheng
TITLE OF INVENTION: HUMAN GENOME-DERIVED SINGLE EXON NUCLEIC ACID PROBES USEFUL
TITLE OF INVENTION: GENE EXPRESSION ANALYSIS BY MICROARRAY
FILE REFERENCE: Acomica X-1
                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Penn, Sharron G.
APPLICANT: Rank, David R.
APPLICANT: Hanzel, David K
APPLICANT: Chen, Wensheng
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUMBER OF SEQ ID NOS: 49117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR FILING DATE: 2000-06-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR APPLICATION NUMBER: US 60/234,687 PRIOR FILING DATE: 2000-09-21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR APPLICATION NUMBER: PCT/US01/00663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION NUMBER: PCT/US01/00665
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION NUMBER: PRIOR FILING DATE: 2001-0:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LENGTH: 103
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         470 GIISILDEECLRPGEATDLTFLEKLEDTVKPHPHFLTHKLADQKTR--KSLDRGEFRLLH 527
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          528 YAGEVTYSVTGFLDKNNDLLFRNLKETMCSSMNPIMAQCFDKSELSD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             56
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE: 2001-01-30
APPLICATION NUMBER: PCT/US01/00670
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: PCT/US01/00662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: US 09/774,203 FILING DATE: 2001-01-29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: PCT/US01/00668
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: PCT/US01/0066
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: PCT/US01/00669
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        YAGTYDYNILGWLEKNKDPLNETYVALYQKSSLKLMATLFSSYATAD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GIMSILEEECMEP-KATDMTEKAKLYD-----NHLGKSNNEQKPRNIKGKQEAHESLIH
DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PCT/US01/00664
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US 09/608,408
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 150.5; DB 10;
Pred. No. 4.6e-05;
4; Mismatches 43;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 103;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          574
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ω
```

FO

PCT/US01/00666

```
ORGANISM: Homo sapiens FEATURE:
FEATURE:
OTHER INFORMATION: MAP TOTHER INFORMATION: EXPRESTORMER INFORMATION: EXPREST INFORMATION: EXPR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 13
US-09-803-126-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                             SOFTWARE: PatentIn Ver.
SEQ ID NO 1
LENGTH: 1337
TYPE: PRT
                                                                                                                                                                                                                                                                                                                          APPLICANT: Brooks, Alan R.
APPLICANT: Beng, Gary G.
APPLICANT: Rubanyl, Gabbor M.
APPLICANT: Rubanyl, Gabbor M.
TITLE OF INVENTION: Estrogen-Regulated Unconventional Myosin-Related TITLE OF INVENTION: Protein: Compositions and Methods of Use FILE REFERENCE: 015303-000310US
CURRENT APPLICATION NUMBER: US/09/803,126
CURRENT FILING DATE: 2001-03-09
CURRENT FILING DATE: 2001-03-09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 1, Application US Patent No. US20020099190A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOFTWARE: Annomax Sequence Listing Engine vers. SEQ ID NO 48341 LENCTH: 77
FEATURE:
OTHER INFORMATION: mouse myosin related protein (MRP)
                                                                                                                                                                                                                                                                      NUMBER OF SEQ ID NOS: 35
                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION NUMBER: US 60/188,488 PRIOR FILING DATE: 2000-03-10
                                                                                                ORGANISM: Mus sp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NUMBER OF SEQ ID NOS: 49117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION NUMBER: US 09/774,203
PRIOR FILING DATE: 2001-01-29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           180 GKYMDVQFDFKGAPVGGHILSYLLEKSRVVHQNHGERNFHVFYQL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              13 GKYFETQFSRGGEPDGGKISNFLLEKSRVVMQNENERNFHIYYQV 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           rocar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE: 2000-09-21 APPLICATION NUMBER: US 09/608,408
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: PCT/US01/00670
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: FILING DATE: 2001-0.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: US 60/234,687 FILING DATE: 2000-09-21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: PCT/US01/00661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: PCT/US01/00662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: PCT/US01/00663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: PCT/US01/00668
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: PCT/US01/00669 FILING DATE: 2001-01-30 APPLICATION NUMBER: PCT/US01/00665 FILING DATE: 2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: PCT/US01/00664 FILING DATE: 2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: FILING DATE: 2001-01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  HEXPRESSED IN BONE IN EXPRESSED IN LUNG, SWISSPROT HIT: P341: EST_HUMAN HIT: BES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2000-06-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US/09803126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PCT/US01/00667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 148; DB Pred. No. 4.6e 7; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              IN BONE MARROW, SIGNAL = 5.7
IN LUNG, SIGNAL = 3.8
HIT: P34092, EVALUE 4.00e-14
HIT: BE513695.1, EVALUE 5.00e-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 10,
4.6e-05;
11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 77;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
```

0;

```
RESULT 14
US-09-864-761-39854
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 39854, Application Patent No. US20020048763A1
                                                                                                                                                                                                          PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                       PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                      PRIOR PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local 9
                                                                                                                                                                                                                                          PRIOR
                                                                                                                                                                                                                                                             PRIOR
                                                                                                                                                                                                                                                                          PRIOR
                                                                                                                                                                                                                                                                                         PRIOR
                                                                                                                                                                                                                                                                                                            PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION NUMBER: PRIOR FILING DATE: 2000-05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION NUMBER: PRIOR FILING DATE: 2000-07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CURRENT APPLICATION NUMBER: US/09/864,761 CURRENT FILING DATE: 2001-05-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE OF INVENTION: HUMAN TITLE OF INVENTION: GENE
                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILE REFERENCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                               OR FILING DATE: 2001-01-30
OR APPLICATION NUMBER: US 6
OR FILING DATE: 2000-09-21
OR APPLICATION NUMBER: US 6
OR APPLICATION NUMBER: US 6
OR FILING DATE: 2000-06-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    715
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                619
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 563 MAQCFDKSEL---SDKKRPETVATQFKMSLLQLVEILRSKEPAY-IRCIKPNDAKQPGRF 618
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  60
APPLICATION NUMBER: US 09/774,203 FILING DATE: 2001-01-29
                                                                                          APPLICATION NUMBER: PCT/US01/00670 FILING DATE: 2001-01-30
                                                                                                                                                             APPLICATION NUMBER: PCT/US01/00662 FILING DATE: 2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local Similarity
                                                                                                                          FILING DATE: 2001-01-30
                                                                                                                                       APPLICATION NUMBER: PCT/US01/00661
                                                                                                                                                                                             FILING DATE:
                                                                                                                                                                                                                      APPLICATION NUMBER: PCT/US01/00668 FILING DATE: 2001-01-30
                                                                                                                                                                                                                                                   APPLICATION NUMBER: PCT/US01/00665
FILING DATE: 2001-01-30
                                                                                                                                                                                                                                                                             FILING DATE: 2001-01-30
ADDITOR TON NUMBER: PCT/US01/00669
                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              \vdash
                                                                                                                                                                                                     APPLICATION NUMBER: PCT/US01/00663
                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: PCT/US01/00664
                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: PCT/US01/00667
                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE: 2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: PCT/US01/00666
                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: US 60/236,359 FILING DATE: 2000-09-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE: 2000-10-04
                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 2001-01-30
                                                                                                                                                                                                                                                                                                                       FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RLRLLPRMQARVRGLQARKRYLQ-RRSAL 200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ---AVLVRHLGYKPEEYKMGRTKIFI------RFPKTLFATEDSLEV----R 714
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MGSLFQEAEPQAGTEQNKP-TLASRFQQTLGDLLARLGSRGHVYVIHCLNPTPGKIPGLL 59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ROSLATKIOAAWRGFHWROKFLRVKRSAI 743
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RCGAILSEVLGAESPLYHLGVTQVLLQEQGWQQLEQLWAQRRSQALLTLHRGLRACITRQ 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DVGHVAEQLRQAGILEIIGTRSTHFPVRVSFQVFLARFHAL-----GSGRQKAASDQE 112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DEVLIRHOVKYLGLMENLRVRRAGFAYRRKYEAFLORYKSLCPETWPMWAGRPQDGV--- 675
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Hanzel, Duning
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Aeomica-X-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sharron G.
                                                              2000-09-21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       David
                               2000-06-30
                                                                                                                                                          2001-01-30
                                                                                                                                                                                        2001-01-30
                                                                                                                                                                                                                                                                                                                    2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2000-08-03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2000-05-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     David R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2000-02-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2.7%;
24.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2001-05-
                                                                             US 60/234,687
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GENOME-DERIVED SINGLE EXON NUCLEIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                               GB 24263.6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US 09/632,366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US 60/207,456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          us 60/180,312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EXPRESSION ANALYSIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US/09864761
                                              09/608,408
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       42;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 145.5;
Pred. No. 0.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            J.0062;
78;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BY MICROARRAY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 1337;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACID PROBES USEFUL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  37;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
```

FO

```
US-09-864-761-41762
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-09-864-761-39854
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 41762,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Patent No. US20020048763A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE OF INVENTION: HUMAN GENOME-DERIVED SINGLE EXON NUCLEIC ACID PROBES USEFUL FOR TITLE OF INVENTION: GENE EXPRESSION ANALYSIS BY MICROARRAY FILE REFERENCE: Aeomica-X-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOFTWARE: Annomax Sequence Listing Engine vers. 1.1 SEQ ID NO 39854
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Penn, Sharron G. APPLICANT: Rank, David R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CURRENT APPLICATION NUMBER: US/09/864,761
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LENGTH: 10
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      OTHER INFORMATION: MAP TO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            470 GIISILDEECLRPGEATDLTFLEKLEDT-----VKPHPHFLTHKLADQKTRKSLDRG 521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  582 ATQF 585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       522 EFRLLHYAGEVTYSVTGFLDKNNDLLFRNLKETMCSSMNPIMAQCFDKSELSDKKRPETV 581
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               50 HFSLIHYAGTVDYNITGWLDKNKD-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ω
                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: US 60/180,312
FILING DATE: 2000-02-04
APPLICATION NUMBER: US 60/207,456
FILING DATE: 2000-05-26
APPLICATION NUMBER: US:09/632,366
                                                                                                                                                                                                                                                                     APPLICATION NUMBER: GB 24263.6 FILING DATE: 2000-10-04 APPLICATION NUMBER: US 60/236,359 FILING DATE: 2000-09-27
                                                                                                                                                                                                                             APPLICATION NUMBER: PCT/US01/00666 FILING DATE: 2001-01-30
                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 2000-08-03
                                                           FILING DATE: 2001-01-30
APPLICATION NUMBER: PCT/US01/00665
                                                                                                                                 APPLICATION NUMBER: PCT/US01/00664 FILING DATE: 2001-01-30
                                                                                                                                                                              APPLICATION NUMBER: PCT/US01/00667 FILING DATE: 2001-01-30
                                                                                                            APPLICATION NUMBER: PCT/US01/00669
                       APPLICATION NUMBER: PCT/US01/00668
                                            FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             INFORMATION:
INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ASLF 95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GIFSILEEECMFP-KATDTSFKNKLYDQHLGKSANFQKP----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Hanzel, Dung
Thon, Wensheng
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Application US/09864761
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     , David R.
el, David K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   N: MAP TO AC005323.1

N: EXPRESSED IN LUNG, SIGNAL = 5.3

N: EXPRESSED IN HEARIN, SIGNAL = 4.6

N: EXPRESSED IN HEART, SIGNAL = 19

N: EXPRESSED IN BONE MARROW, SIGNAL = 5.4

N: EXPRESSED IN BUILT LIVER, SIGNAL = 3.5

N: EXPRESSED IN PLACENTA, SIGNAL = 5.4

N: EXPRESSED IN HELA, SIGNAL = 4.1

N: EXPRESSED IN FETAL LIVER, SIGNAL = 4.1
                                            2001-01-30
2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 144.5; DB 1v;
Pred. No. 0.00013;
Pred. No. 29;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ----PLNDTVVGLYQKSAM-----KTL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 100;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -KVVKGKAEA 49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              39;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
```

ω ••

```
밁
                                 Qy
                                                                       밁
                                                                                                       Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQ ID NO 41762
LENGTH: 102
                                                                                                                                              Matches
                                                                                                                                                             Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR FILING DATE: 2000-09-21
PRIOR APPLICATION NUMBER: US 09/608,408
PRIOR FILING DATE: 2000-06-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR FILING DATE: 2001-01-30
PRIOR APPLICATION NUMBER: PCT/US01/00662
PRIOR FILING DATE: 2001-01-30
PRIOR APPLICATION NUMBER: PCT/US01/00661
PRIOR FILING DATE: 2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR FILING DATE: 2001-01-29
NUMBER OF SEQ ID NOS: 49117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOFTWARE: Annomax Sequence Listing Engine vers. 1.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR APPLICATION NUMBER: US 09/774,203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION NUMBER: US 60/234,687
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR APPLICATION NUMBER: PCT/US01/00670 PRIOR FILING DATE: 2001-01-30
                                                                                                                                                                                                                                                                                         OTHER
OTHER
                                                                                                                                                                                                                                                                                                                             OTHER
                                                                                                                                                                                                                                                                                                                                                               OTHER
OTHER
                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                          OTHER
                                                                                                                                                                                                                                                                                                                                                                                                  OTHER INFORMATION: OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LENGTH:
                                                                                          470 GIISILDEECLRPGEATDLTFLEKLEDT-----VKPHPHFLTHKLADQKTRKSLDRG 521
                               522 EFRLLHYAGEVTYSVTGFLDKNNDLLFRNLKETMCSSMNPIMAQCFDKSELSD 574
50 HFALIHYAGVVDYNITGWLEKNKDPLNETVVGLYQKSAMKTLAQLFSGAQTAE 102
                                                                       ω
                                                                       GIFSILEEECMFP-KATDTSFKNKLYDQHLGKSANFQKP----
                                                                                                                                                                                                                                      INFORMATION:
                                                                                                                                                                                                                                                                                                                             INFORMATION:
                                                                                                                                                                                                                                                                          INFORMATION:
                                                                                                                                                                                                                                                                                                                                                INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                 INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                 INFORMATION:
                                                                                                                                                                                                                                                                                             INFORMATION:
                                                                                                                                                                                                                                                                                                              INFORMATION:
                                                                                                                                            39; Conserv
                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                            : MAP TO AC005323.1,
EXPRESSED IN BRAIN, S
EXPRESSED IN FETAL LI
EXPRESSED IN HELA, SI
EXPRESSED IN BONE MAR
                                                                                                                                                                                                                                      EST_HUMAN
SWISSPROT
                                                                                                                                                                                                                                                                                       EXPRESSED
EXPRESSED
                                                                                                                                                                                                                                                                          EXPRESSED
                                                                                                                                                                                                                                                                                                                             EXPRESSED
                                                                                                                                                             2.7%;
                                                                                                                                          15;
                                                                                                                                                                                                                                 IN PLACENTA, SIGNAL = 1.6
IN HEART, SIGNAL = 2.4
IN ADDLT LIVER, SIGNAL = 2.4
HIT: F00185.1, EVALUE 5.00e-26
HIT: P13535, EVALUE 4.00e-50
                                                                                                                                                                                                                                                                                                                         IN FETAL LIVER, SIGNAL = 2.4
IN HELA, SIGNAL = 1.9
IN BONE MARROW, SIGNAL = 4.6
IN LUNG, SIGNAL = 1.7
                                                                                                                                                             Score 144.5; DB 1
Pred. No. 0.00013;
                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                    SIGNAL
                                                                                                                                                                              DB 10;
                                                                                                                                            Indels
                                                                                                                                                                              Length 102;
                                                                       -KVVKGKAEA 49
                                                                                                                                          21;
                                                                                                                                          Gaps
```

Search completed: December 9, 2002, 16:55:10 Job time : 26 secs

· :			
· :			
	·		
	·		
		.	
•			
			^
		·	
	·		

```
Resul
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Maximum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Minimum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Total number
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   protein -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ŏ
     Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
5261
5128
4371
44371
44371
416.5
2252
2100.5
2094.5
2094.5
2095.5
11804
1803.5
1776.5
1776.5
1779.5
1779.5
1779.5
1779.5
1779.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
1799.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB
BG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              protein search, using
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PIR_73:*
1: pir1:*
2: pir2:*
3: pir3:*
4: pir4:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query
Match Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BLOSUM62
Gapop 10.0 , Gapext 0.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-09-893-371-1
5398
1 MRYRASALGSDGV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       283224 seqs, 96134422 residues
     340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
340.00
34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      97.5
95.3
95.0
81.0
77.2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MRYRASALGSDGVRVTMESA.....
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Copyright
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2000000000
  9, 2002, 16:43:21; Search time 43 Seconds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GenCore version (c) 1993 - 2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB
S37143
A59251
A59274
A59274
A59274
B45438
B45439
A54534
A5433
A54339
A54339
A54339
A54339
A54339
A55573
S45573
S45573
A573284
A752517
A73284
A752517
A73284
A756511
MWAXIG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (without alignments)
2334.054 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 5.1.3
Compugen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .LITKAKNGHLAVVAPRLNSR 1044
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ltd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           283224
                                                                  myosin heavy chain myosin heavy chain myosin I myr 4 - r myosin IA - fruit myosin IA - Caenor myosin IF heavy chamyosin-IG [similar myosin-IC [similar myosin heavy chain myosin heavy chain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     myosin I heavy cha
myosin I beta - hu
myosin heavy chain
myosin I beta - bu
                                                                                                                                                                                                                                                                                                                                                                                                                    myosin heavy chain
myosin-I, Myr 1b (
myosin I alpha cha
myosin I heavy cha
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      myosin-Ic - mouse
myosin IB - fruit
myosin I beta, MMI
myosin-I, Myr 1c (
                       hypothetical myosin I myos
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Description
                         myoA
                       prote
A - Em
```

pperii i		45	44	43	42	41	40	39	38	37	36	35	34	33	32	31	30	
_		1328	1331	1331	1335	1336	1346	1352	1354	1354	1361	1382.5	1450	1453	1473	1501	1509.5	
		24.6	24.7	24.7	24.7	24.7	24.9	25.0	25.1	25.1	25.2	25.6	26.9	26.9	27.3	27.8	28.0	
		1611	2062	1477	2121	1528	839	1515	2175	1203	2357	1446	1271	1181	1215	1219	1217	
		Ν	N	2	N	N	2	N	2	2	N	N	Ν	N	2	N	2	
	ALIGNMENTS	A84743 -	A59297	T00957	A59233	T14279	F85334	S51824	A59255	A59257	A59249	T04528	S37958	T30578	T32734	S54570	T39427	
		probable myosin he	myosin X - mouse	myosin heavy chain	myosin VII-like pr	myosin-like protei	myosin heavy chain	myosin heavy chain	myosin VIIa, long	myosin VIIa, short	class VII unconven	myosin heavy chain	myosin heavy chain	myosin IC - slime	myosin-IA - Acanth	probable membrane	probable myosin I	

mysin I heavy chain - rat
()Species: Rattus norvegicus (Norway rat)
()Species: Rattus norvegicus (Norway rat)
()Date: 06-Jan-1995 #sequence_revision 06-Jan-1995 #tex
()Accession: S37146
R;Ruppert, C.; Gogel, J.; Reinhard, J.; Baehler, M.
submitted to the EMBL Data Library, August 1993
A;Description: MYR-2 a novel class-I Myosin identified
A;Reference number: S37146
A;Accession: S37146 A; Molecule type: mRNA
A; Residues: 1-1028 < CMD>
A; Residues: 1-1028 < CMD>
A; Cross-references: EMBL:X74800; NID:g400428; PIDN:CAA52807.1;
C; Superfamily: brush border myosin heavy chain I; myosin motor C; Keywords: nuclectide binding; P-loop
F;14-683/Domain: myosin motor domain homology < MMOT>
F;105-112/Region: nuclectide-binding motif A (P-loop) S37146 Qγ В Qy B QΥ DЬ Ωy дδ δÃ DЬ δÃ A; Status: preliminary Query Match Best Local Similarity Matches 1015; Conserv 241 257 181 197 121137 61 17 77 SSINDKSDWKVMRKALSVIDFTEDEVEDLLSIVASVLHLGNIHFAADEDSNAQVTTENQL HILSYLLEKSRVVHQNHGERNFHVFYQLLEGGEEEALRRLGLERNPQSYLYLVKGQCAKV HILSYLLEKSRVYHQNHGERNFHVFYQLLEGGEEETLRRLGLERNPQSYLYLVKGQCAKV FYAETCPAPERGGAVRDRLLQSNPVLEAFGNAKTLRNDNSSRFGKYMDVQFDFKGAPVGG FYAETCPAPERGGAVRDRLLQSNPVLEAFGNAKTLRNDNSSRFGKYMDVQFDFKGAPVGG SSINDKSDWKVVRKALSVIDFTEDEVEDLLSIVASVLHLGNIHFAADEDSNAQVTTENQL Conservative 97.5%; 98.7%; Score 5261; Pred. No. 0; Mismatches DB 2; Length 1028; 6; Indels #text_change 'n rat brain PID:g400429 domain homology 02-Feb-2001 0; Gaps 196 120 136 300 316 240 256 180 0;

20 Дb

361 377 301

KINRSLASKDAESPSWRSTTVLGLLDIYGFEVFQHNSFEQFCINYCNEKLQQLFIELTLK 436

360

Š

60

```
A/Experimental source: dev stage adult; tissue type C;Genetics:
A:Genetics:
A:
                                                                                                                                                                                                                          A;Status: preliminary; not compared with conceptual translation A;Molecule type: mRNA A;Residues: 1-1028 <CROS A;Cross-references: GB:X98507; NID:g1926310; PIDN:CAA67131.1; P
                                                                                                                                                                                                                                                                                                           RESULT 2
A59253

myosin I beta - human
C:Species: Homo saplens (man)
C:Species: Homo saplens (man)
C:Date: 19-May-2000 #sequence_revision 19-May-2000 #text_change 08-Sep-2000
C:Accession: A59253
R:Crozet, F: Amraoul, A.E.; Blanchard, S.; Lenoir, M.; Ripoll, C.; Vago, P.; Hamel, C.; Genomics 40, 332-341, 1997
A:Reference number: A59253; MUID:97237053; PMID:9119401
A:Reference number: A59253; MUID:97237053; PMID:9119401
                                                                     Query Match
Best Local S
Matches 989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Д
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ф
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1037
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               977
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                90<u>1</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    797
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    737
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         677
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          617
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 421
MESALTARDRVGVQDEVLLENETSEAAFIENLRRRFRENLIYTYIGPVLVSVNPYRDLQI 76
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 497
                                                                         989;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SDHVIETLTKTALSADRVNNININQGSITFAGGPGRDGIIDFTSGSELLITKAKNGHLAV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SDHVIETLTKTALSADRVNNININQGSITFAGGPGRDGIIDFTSGSELLITKAKNGHLAV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VAPRLNSR 1028
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VAPRLNSR 1044
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VASEIFKGKKDNYPQSVPRLFISTRLGTEEISPRVLQALGSEPIQYAVPVVKYDRKGYKP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VASEIFKGKKDNYPOSVPRLFISTRLGTEEISPRVLOSLGSEPIQYAVPVVKYDRKGYKP 916
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FLLNLRRQLPRNYLDTSWPTPPPALREASELLRELCMKNWVWKYCRSISPEWKQQLQQKA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RVKRSAICIQSWWRGTLGRRKAAKRKWAAQTIRRLIRGFILRHSPRCPENAFFLDHVRAS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RVKRSAICIOSWWRGTLGRRKAAKRKWAAQTIRRLIRGFILRHAFRCPENAFFLDHVRTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VLVRHLGYKPEEYKMGRTK1F1RFPKTLFATEDSLEVRROSLATK10AAWRGFHWRQKFL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VLVRHLGYKPEEYKMGRTKIFIREPKTLEATEDSLEVRROSLATKIQAAWRGEHWROKFL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RFDEVLIRHOVKYLGLMENLRVRRAGFAYRRKYEAFLQRYKSLCPETWPVWTGRPQDGVA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REDEVLIRHQVKYLGLMENLRVRRAGFAYRRKYEAFLQRYKSLCPETWPMWAGRPQDGVA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQEEYEAEGIAWEPVQYFNNKIICDLVEEKFKGIISILDEECLRPGEATDLTFLEKLED
                                                            95.3%; Score 5143; I
llarity 96.2%; Pred. No. 0;
Conservative 23; Mismatches
                                                                                                                                                                                                         GB:x98507; NID:g1926310; PIDN:CAA67131.1; PID:g1926311
ce: dev stage adult; tissue type kidney
                                                                                             DB
                                                            16;
                                                                                                                                               myosin
                                                                                         Length
                                                          Indels
                                                                                                                                               motor
                                                                                                                                             domain
                                                        0,
                                                   Gaps
                                                                                                                                       homology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1036
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 796
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           616
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             556
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               496
                                                     0;
                                                                  Вþ
                                                                                                                                    DЪ
                                                                                                                                                                 Q
                                                                                                                                                                                                      Ъ
                                                                                                                                                                                                                                 Qy
                                                                                                                                                                                                                                                                      Вb
                                                                                                                                                                                                                                                                                                       δÃ
                                                                                                                                                                                                                                                                                                                                            Дb
                                                                                                                                                                                                                                                                                                                                                                       Qy.
                                                                                                                                                                                                                                                                                                                                                                                                            Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                         Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Дβ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     QV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Дb
                                                              1021
                                                                                                 1037
                                                                                                                                  961
                                                                                                                                                                                                      901
                                                                                                                                                                                                                                     917
                                                                                                                                                                                                                                                                        841
                                                                                                                                                                                                                                                                                                       857
                                                                                                                                                                                                                                                                                                                                            781
                                                                                                                                                                                                                                                                                                                                                                                                            721
                                                                                                                                                                                                                                                                                                                                                                         797
                                                                                                                                                                                                                                                                                                                                                                                                                                           737
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               677
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 617
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       497
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         377
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   137
                                                                                                                                                                                VAPRLNYR 1028
                                                                                  VAPRLNSR
                                                                                                               SDHVIETLTKTALSANRVNSININGGSITFAGGPGRDGTIDFTPGSELLITKAKNGHLAV
                                                                                                                                  SDHVIETLTKTALSADRVNNININOGSITFAGGPGRDGIIDFTSGSELLITKAKNGHLAV 1036
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61
                                                                                                                                                                                                                                                                        VASEIFKGKKDNYPQSVPRLFISTRLGTEEISPRVLQSLGSEPIQYAVPVVKYDRKGYKP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     77
                                                                                                                                                                                                                                                     VASEIFKGKKDNYPQSVPRLFISTRLGTDEISPRVLQALGSEPIQYAVPVVKYDRKGYKP
                                                                                                                                                                                                                                                                                                                       FLINLRRQLPRNVLDTYWPTPPPALREASELLRELCIKNMVWKYCRSISPEWKQQLQQKA
                                                                                                                                                                                                                                                                                                                                          FLLMLRRQLPRNVLDTSWFTPPPALREASELLRELCMKNMVWKYCRSISPEWKQQLQQKA
                                                                                                                                                                                                                                                                                                                                                                                         RVKRSAICIQSWWRGTLGRRKAAKRKWAAQTIRRLIRGFILRHAPRCPENAFFLDHYRTS
                                                                                                                                                                                                                                                                                                                                                                                                          RVKRSAICIQSWWRGTLGRRKAAKRKWAAQTIRRLIRGFILRHSPRCPENAFFLDHVRAS
                                                                                                                                                                                                                                                                                                                                                                                                                                                           VLVRHLGYKPEEYKMGRTKIFIRFPKTLFATEDALEVRRQSLATKIQAAWRGFHWRQKFL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VLVRHLGYKÞEBYKMGRTKIFIRFÞKTLFATEDSLEVRRQSLATKIQAAWRGFHWRQKFL 736
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RFDEVLIRHQVKYLGLMENLRVRRAGFAYRRKYEAFLQRYKSLCPETWPMMAGRPQDGVA 676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TVKHHPHFLTHKLADQRTRKSLGRGEFRLLHYAGEVTYSVTGFLDKNNDLLFRNLKETMC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TVKPHPHFLTHKLADQKTRKSLDRGEFRLLHYAGEVTYSVTGFLDKNNDLLFRNLKETMC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KINRSLASKDAESPSWRSTTVLGLLDIYGFEVFQHNSFEQFCINYCNEKLQQLFIELTLK 436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SSINDKSDWKVVRKALTVIDETEDEVEDLLSIVASVLHLGNIHEAANEDSNAQVTTENOL 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SSINNKSDWKVMRKALSVIDFTEDEVEDLLSIVASVLHLGNIHFAADEDSNAQVTTENQL 316
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              HILSYLLEKSRVVHQNHGERNFHIFYQLLEGGEEETLRRLGLERNPQSYLYLVKGQCAKV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                HILSYLLEKSRVVHONHGERNFHVFYOLLEGGEEETLRRLGLERNPOSYLKLVKGQCAKV 256
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FYAETCPAPQRGGAVRDRLLQSNPVLEAFGNAKTLRNDNSSRFGKYMDVQFDFKGAPVGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FYAETCPAPERGGAVRDRLLQSNPVLEAFGNAKTLRNDNSSRFGKYMDVQFDFKGAPVGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  YSROHMERYRGVSFYEVPPHLFAVADTVYRALRTERRDQAVMISGESGAGKTEATKKLLQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      YSRQHMERYRGVSEYEVPPHLEAVADTVYRALRTERRDQAVMISGESGAGKTEATKRLLQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MDSALTARDRYGYQDFYLLENFTSEAAFIENLRRRFRENLIYTYIGPYLYSYNPYRDLQI
                                                                                             1044
```

Ş

1020

960

900 916 856

840

796

720

600 616

556 540

480 496 360

240

180 196 120

```
A.Cross-references: EMBL:222852
A.Experimental source: brain
C.Superfamily: brush border myosin heavy chain I; myosin motor
C.Keywords: actin binding: ATP; calmodulin binding: nucleotide
F:14-683/Domain: myosin motor domain homology <MMOTY
F:105-112/Region: nucleotide-binding motif A (P-loop)
F:576-95/Region: actin binding #status predicted
F:699-743/Region: calmodulin binding #status predicted
                                                                                                                                                                                                               рь
                                                                                                                                                                                                                                                  ρ
                                                                                                                                                                                                                                                                                          Вþ
                                                                                                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                                                                                                                                  Вb
                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A; Molecule type: mRNA
A; Residues: 1-6 'C', 8-96, 'R', 98-221, 'PGT', 223-281, 'N', 283-296, 'GTSSST', 303, 'PGPWVWR', 307-721, 'L', 723-909, 'WSF', 323-288, 'SSQ', 992-994, 'AGMASLTSH', 1004, 'ARSCSSPRERT', 1016, 'TW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             R;Reizes, O.; Li, C.; Sudhof, T.C.; Albanesi, J.P. submitted to the EMBL Data Library, May 1993
A;Description: Domain structure of a mammalian myosin I (bovine myosin A;Reference number: S33497
A;Accession: S33497
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Experimental source: adrenal gland R; Reizes, O.; Barylko, B.; Li, C.; Suedhof, T.C.; Proc. Natl. Acad. Sci. U.S.A. 91, 6449-6353, 1994 A; Title: Domain structure of a mammalian myosin Ib A; Reference number: A55744; MUID:94294379; PMID:80 A; Accession: A55744
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A; Molecule type: mRNA
A; Residues: 1-1028 <ZHU>
A; Cross-references: GB:U03420; NID:g436936; PIDN:AAA17565.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              myosin heavy chain I beta - bovine
N;Alternate names: myosin IB heavy chain
C;Species: Bos primiaenine + .....
                          Ωy
                                                                      Вb
                                                                                                   Qy
                                                                                                                                             В
                                                                                                                                                                           Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A;Molecule type: mRNA
A;Residues: 1-6,'C',8-96,'R',98-319,'N',321-362,'K',364-385,'D',387-543,'I',545-549,'F'
A;Cross-references: GB:222852; NID:g397402; PIDN:CAA80476.1; PID:g397403
A;Experimental source: brain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Reference number: A; Accession: S41749
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         R; Zhu, T.; Ikebe, M.
FEBS Lett. 339, 31-36, 1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            C;Species: Bos primigenius taurus (cattle)
C;Date: 20-May-1994 #sequence_revision 02-Jun-1995 #text_change 02-Feb-2001
C;Accession: S41749; A55744; S33497
 吕
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; Status: nucleic acid sequence not shown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Title: A novel myosin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                          317
                                                                                                                                             241
                                                                                                                                                                                                                     181
                                                                                                                                                                                                                                                         197
 361
                                      377
                                                                        301
                                                                                                                                                                                 257
                                                                                                                                                                                                                                                                                            121
                                                                                                                                                                                                                                                                                                                              137
                                                                                                                                                                                                                                                                                                                                                                  61
                                                                                                                                                                                                                                                                                                                                                                                                    77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               17
                                                                                                                                           FYAETCPAPERGGAVRDRLLQSNPVLEAFGNAKTLRNDNSSRFGKYMDVQFDFKGAPVGG 196
                                                                                                                                                                                                                                                                                                                                                              YSRQHMERYRGVSFYEVPPHLFAVADTVYRALRTERRDQAVMISGESGAGKTEATKRLLQ 136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MESALTARDRYGVQDFYLLENFTSEAAFIENLRRRFRENLIYTYIGPYLVSVNPYRDLQI 76
               KINRSLASKDAESPSWRSTTVLGLLDIYGFEVFQHNSFEQFCINYCNEKLQQLFIELTLK 436
                                                                                         KYLTRLLGVEGTTLREALTHRKIIAKGEELLSPLNLEQAAYARDALAKAVYSRTFTWLVR 376
                                                                                                                                                                                                                     HILSYLLEKSRVVHQNHGERNFHIFYQLLEGGEEETLRRLGLERNPQSYLYLVKGQCAKV
                                                                                                                                                                                                                                  HILSYLLEKSRVVHQNHGERNEHVEYQLLEGGEEETLRRLGLERNPQSYLYLVKGQCAKV 256
                                                                                                                                                                                                                                                                                                                                                                                                                                       KINRSLASKDAESPSWRSTTVLGLLGIYGFEVFQHNSFEQFCINYCNEKLQQLFIELTLK
                                                                      KYLTRLLGVEGSTLREALTHRKIIAKGEELLSPLNLEQAAYARDALAKAVYSRTFTWLVA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           site: ATP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   osin I fr
S41749;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (Lys) #status
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  95.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     from bovine adrenal gland.
); MUID:94148088; PMID:8313976
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   25;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 5128;
Pred. No. 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PMID:8022785
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DВ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ibeta
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 1028;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PID:g436937
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               domain homology binding; P-loop
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0,:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                   240
                                                                                                                                                                                                                                                                                                                                                                                                                                         60
                                                                      360
                                                                                                                                             300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 IB)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Вр
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ρy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
```

```
R:Metcalf, A.B.; Chelliah, Y.; Hudspeth, A.J.
Proc. Natl. Acad. Sci. U.S.A. 91, 11821-11825, 1994
A;Title: Molecular cloning of a myosin I beta isozyme
A;Reference number: I51173, MUID:95083594; PMID:799154
A;Accession: I51173
                                                                                                                                            A;Cross-references:
C;Genetics:
                                                                                                                                                                         A; Molecule type: mRNA
A; Residues: 1-1028 < MI
                                                                                                                                                                                                                                                                                                   myosin I beta - bullfrog
C;Species: Rana catesbeiana (bullfrog)
C;Date: 13-Sep-1996 #sequence_revision 13-Sep-1996 #text_change
C;Accession: I51173
                                                                                                                                                                                                         A; Status: preliminary;
                                                                                                                                                                                                                                                                                                                                                                     I51173
                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                    1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1037
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                977
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             917
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          857
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      797
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    737
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   677
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               497
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VLVRHLGYKPEEYKMGRTKIFIRFPKTLFATEDSLEVRRQSLATKIQAAWRGFHWRQKFL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FLLNLRRQLPRNVLDTSWPTPPPALREASELLRELCMKNMVWKYCRSISPEWKQQLQQKA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SSMNPIMAQCFDKSELSDKKRPETVATQFKMSLLQLVEILRSKEPAYIRCIKPNDAKQPG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQEEYEAEGIAWEPVQYFNNKIICDLVEEKFKGIISILDEECLRPGEATDLTFLEKLED 496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SDHVIETLTKTALSADRVNNININQGSITFAGGPGRDGIIDFTSGSELLITKAKNGHLAV 1036
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FLLNLRRQLPRNILDTSWPTPPPALREASELLRELCRKNMVWKYCRSISPEWKQQLQQKA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RVKRSAICIQSWWRGTLGRRKAAKRKWAAQTIRRLIRGFILRHSPRCPENAFFLDHVRAS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RFDEVLIRHQVKYLGLMENLRVRRAGFAYRRKYEAFLQRYKSLCPETWPMWAGRPQDGVA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TIKQHPHFLTHKLADQRTRKSLDRGEFRLLHYAGEVTYNVTGFLDKNNDLLFRNLKETMC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TVKPHPHFLTHKLADQKTRKSLDRGEFRLLHYAGEVTYSVTGFLDKNNDLLFRNLKETMC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQEEYEAEGIAWEPVQYFNNKIICDLVEEKFKGIISILDEECLRPGEATDLTFLEKLED
                                                                                                                                                                                                                                                                                                                                                                                                                                    VAPRLNSR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VAPRLNSR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SDHVIETLTKTALSADRVNNININQGSITFAGGPGRDGIIDFTPGSELLITKAKNGHLAV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         VASEIFKGKKDNYPQSVPRLFISTRLGTEEISPRVLQSLGSEPIQYAVPVVKYDRKGYKP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RVKRSAICIQSWWRGTLGRRKAAKRKWAAQTIRRLIQGFILRHAPRCPENAFFVDHVRTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VLVRHLGYKPEEYKMGRTKIFIRFPKTLFATEDALEIRRQSLATKIQATWRGFHCRQKFL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RFDEVLIRHQVKYLGLMENLRVRRAGFAYRRKYEAFLQRYKSLCPETWPTWTGRRQDGVT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SSENPILGQCFDRSELSSKKRPETVATQFKMSLLELVEILKSKEPAYVRCIKPNDSKQPG
                                                                                                                                                                                                                                                                                                                                                                                                                                    1028
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1044
                                                                                                                                                                             <MET>
                                                                                                                                                            EMBL:U14549;
                                                                                                                                                                                                          translated from
81.0%;
79.2%;
                                                                                                                                                                                                                         MUID:95083594; PMID:7991542
                                                                                                                                                           NID: g602137;
Score 4371;
Pred. No. 7.
                                                                                                                                                                                                         GB/EMBL/DDBJ
; DB 2;
7.8e-272;
                                               (P-loop)
                                                                                                                                                           PIDN:AAA57192.1;
                                                                <MMOT>
                                                                                               myosin
                Length 1028;
                                                                                               motor
                                                                                                                                                                                                                                                       may
                                                                                               domain
                                                                                                                                                           PID: 9602138
                                                                                                                                                                                                                                                         mediate
                                                                                                                                                                                                                                                                                                                      02-Feb-2001
                                                                                             homology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               556
                                                                                                                                                                                                                                                         adaptation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            976
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          916
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    796
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 736
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                616
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     720
```

Local Similarity

814;

Conservative

112;

Mismatches

Indels

0

Gaps

0

γď

B & B &

٠,

```
961
                                                                                 901
                                                                                                    917
                                                                                                                         841
                                                                                                                                             857
                                                                                                                                                                781
                                                                                                                                                                                     797
                                                                                                                                                                                                          721
                                                                                                                                                                                                                             737
                                                                                                                                                                                                                                                  661
                                                                                                                                                                                                                                                                                           601
                                                                                                                                                                                                                                                                                                             617
                                                                                                                                                                                                                                                                                                                                  541
                                                                                                                                                                                                                                                                                                                                                      557
                                                                                                                                                                                                                                                                                                                                                                          481
                                                                                                                                                                                                                                                                                                                                                                                             497
                                                                                                                                                                                                                                                                                                                                                                                                                  421
                                                                                                                                                                                                                                                                                                                                                                                                                                    437
                                                                                                                                                                                                                                                                                                                                                                                                                                                         361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              377
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   77
                                             SDHVIETLTKTALSADRVNNININQGSITFAGGDGRDGIIDFTSGSELLITKAKNGHLAV
                                                                        VAPRLNSR
                                                                                                                                                         FLLNLRRQLPRNVLDTSWPTPPPALREASELLRELCMKNNVWKYCRSISDEWKQQLQQKA
                                                                                                                                                                                                  HMKHSAVEIQSWWRGTIGRRKAAKRKWAVDVVRRFIKGFIYRNQPRCTENEYFLDYIRYS
                                                                                                                                                                                                                                         VLVKSLGYKPEEYKMGRTKIFIRFPKTLFATEDALEVRKHSIATFLQARWRGYHQRQKFL
                                                                                                                                                                                                             RVKRSAICIOSWWRGTLGRRKAAKRKWAAQTIRRLIRGETLRHSDRCPENAFFLDHYRAS
                                                                                                                                                                                                                                                    VLVRHLGYKPEEYKMGRTKIFIRFPKTLFATEDSLEVRROSLATKIQAAWRGFHWROKFL
                                                                                                                                                                                                                                                                                   RFDEVLIRHQVKYLGLIENVRVRRAGFAYRRKYEIFLQRYKSLCFDTWPNWDGRAMDGVA
                                                                                                                                                                                                                                                                                             RFDEVLIRHOVKYLGLMENLRVRRAGFAYRRKYEAFLORYKSLCPETWPMWAGRPQDGVA
                                                                                                                                                                                                                                                                                                                         DSGNPIAHQCFNRSELTDKKRPETAATQFKNSLSKLMEILMSKQPSYVRCIKPNDAKQPA
                                                                                                                                                                                                                                                                                                                                     SSMNPIMAQCFDKSELSDKKRPETVATQFKMSLLQLVEILRSKEPAYIRCIKPNDAKQPG
                                                                                                                                                                                                                                                                                                                                                                  TVKPHPHFLTHKLADQKTRKSLDRGEFRLLHYAGEVTYSVTGFLDKNNDLLFRNLKETMC
                                                                                                                                                                                                                                                                                                                                                                                                         SEQEEYEAEGIAWEPVQYFNNKIICDLVEEKFKGIISILDEECLRPGEATDLTFLEKLED
                                                                                                                                                                                                                                                                                                                                                                                                                                                KYLARLLSVDSTVLRESLIHKKIIAKGEELNSPLNLEQAAYARDALAKAIYGRTFSWLVS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KYLTRLLGVEGTTLREALTHRKIIAKGEELLSPLNLEQAAYARDALAKAVYSRTETWLVR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SSINDKSDWKVMRKALSVIDFTEDEVEDLLSIVASVLHLGNIHFAADEDSNAQVTTENQL 316
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HILSYLLEKSRVVHONHGERNEHVFYQLLEGGEEETLRRLGLERNPOSYLYLVKGOCAKV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 HILNYLLEKSRVVHONHGERNEHIEYOLLEGGEEDLLRRLGLDKNAONYOYLIKGOCARV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          YSROHMERYRGVSEYEVPPHLEAVADTVYRALRTERRDQAVMISGESGAGKTEATKRLLQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TETLTKVAITAEKINNININQGSIKFTVGPGKEGIIDFTAGSELLIAKAKNGHLSV
1028
                   1044
                                                     1036
                                                                          960
                                                                                               976
                                                                                                                                                                              856
                                                                                                                                                                                                   780
                                                                                                                                                                                                                      796
                                                                                                                                                                                                                                           720
                                                                                                                                                                                                                                                               736
                                                                                                                                                                                                                                                                                    660
                                                                                                                                                                                                                                                                                                       676
                                                                                                                                                                                                                                                                                                                          600
                                                                                                                                                                                                                                                                                                                                               616
                                                                                                                                                                                                                                                                                                                                                                   540
                                                                                                                                                                                                                                                                                                                                                                                     556
                                                                                                                                                                                                                                                                                                                                                                                                          480
                                                                                                                                                                                                                                                                                                                                                                                                                              496
                                                                                                                                                                                                                                                                                                                                                                                                                                                  420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    76
```

В δ В Ş ₽ Š 문 Š В Š В δ В õ Ф γQ В Ş 밁 á В Ş В õ В δÃ g õ В õ В δô

```
RESULT 5
H75634
myosin-Ic - mouse (fragment)
N;Alternate names: myosin-I beta
C:Species: Mus musculus (house mouse)
C;Date: 02-Jun-2000 #sequence_revision 02-Jun-2000 #text_change 08-9
C;Accession: H75634
R:Crozet, F:; Amraoui, A.E.; Blanchard, S.; Lenoir, M.; Ripoll, C.;
Genomics 40, 332-341, 1997
A:Title: Cloning of the genes encoding two murine and human cochlea:
A:Accession: H75634
A:Status: preliminary; not compared with conceptual translation
A:Molecula tune. mpnn
         Ş
                                     DЬ
                                                                                      B
                                                                                                              δÃ
                                                                                                                                          B
                                                                                                                                                                 Qy
                                                                                                                                                                                              Ъ
                                                                                                                                                                                                                      Q_{Y}
                                                                                                                                                                                                                                                Вb
                                                                                                                                                                                                                                                                       δÃ
                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                            Qy
                                                                                                                                                                                                                                                                                                                                                       B
                                                                                                                                                                                                                                                                                                                                                                                 Qy
                                                                                                                                                                                                                                                                                                                                                                                                            DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                    γ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Gene: MGI:Myolc
A;Cross-references: MGI:106612
A;Map position: 11:44.1
C;Superfamily: brush border myosin heavy
F;14-683/Domain: myosin motor domain homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ρy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A; Molecule type: mRNA
A; Residues: 1-807 <CRO>
A; Cross-references: GB:X99638; NID:g1924960;
A; Experimental source: strain BALB/c; tissue
C; Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local S
Matches 800
            677
                                    601
                                                                                      541
                                                                                                                557
                                                                                                                                         481
                                                                                                                                                                   497
                                                                                                                                                                                              421
                                                                                                                                                                                                                      437
                                                                                                                                                                                                                                                                           377
                                                                                                                                                                                                                                                361
                                                                                                                                                                                                                                                                                                      301
                                                                                                                                                                                                                                                                                                                                                        241
                                                                                                                                                                                                                                                                                                                                                                                 257
                                                                                                                                                                                                                                                                                                                                                                                                            181
                                                                                                                                                                                                                                                                                                                                                                                                                                     197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      μ
                                                                             VLVRHLGYKPEEYKMGRTKIFIRFPKTLFATEDSLEVRRQSLATKIQAAWRGFHWRQKFL
                                        RFDEVLIRHQVKYLGLMENLRVRRAGFAYRRKYEAFLQRYKSLCPETWPMWAGRPQDGVA
                                                                                                                                TVKPHPHFLTHKLADQKTRKSLDRGEFRLLHYAGEVTYSVTGFLDKNNDLLFRNLKETMC
                                                                                                                                              TVKPHPHFLTHKLADQKTRKSLDRGEFRLLHYAGEVTYSVTGFLDKNNDLLFRNLKETMC
                                                                                                                                                                                   SEQEEYEAEGIAWEPVQYFNNKIICDLVEEKFKGIISILDEECLRPGEATDLTFLEKLED
                                                                                                                                                                                                                                       RFDEVLIRHQVKYLGLMENLRVRRAGFAYRRKYEAFLQRYKSLCPETWPMWAGRPQDGVA
                                                                                                                                                                                                                                                                                            KYLTRLLGVEGTTLREALTHRKIIAKGEELLSPLNLEQAAYARDALAKAVYSRTFTWLVR
                                                                                                                                                                                                                                                                                                          KYLTRLLGVEGTTLREALTHRKIIAKGEELLSPLNLEQAAYARDALAKAVYSRTETWLVR
                                                                                                                                                                                                                                                                                                                                              SSINDKSDWKVMRKALSVIDFTEDEVEDLLSIVASVLHLGNIHFAADEDSNAQVTTENQL
                                                                                                                                                                                                                                                                                                                                                                                                    HILSYLLEKSRVVHQNHGERNFHVFYQLLEGGEEETLRRLGLERNPQSYLYLVKGQCAKV
                                                                                                                                                                                                                                                                                                                                                                                                                  HILSYLLEKSRVVHQNHGERNFHVFYQLLEGGEEETLRRLGLERNPQSYLYLVKGQCAKV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MESALTARDRVGVQDEVLLENETSEAAFIENLRRRERENLIYTYIGPVLVSVNPYRDLQI
                                                                                                                                                                                                                                                                                                                                                              SSINDKSDWKVMRKALSVIDFTEDEVEDLLSIVASVLHLGUNHFAADEDSNAQVTTENQL
                                                                                                                                                                                                                                                                                                                                                                                                                                                      FYAETCPAPERGGAVRDRLLQSNPVLEAFGNAKTLRNDNSSRFGKYMDVQFDFKGAPVGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FYAETCPAPERGGAVRDRLLQSNPVLEAFGNAKTLRNDNSSRFGKYMDVQFDFKGAPVGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MESALTARDRVGVQDFVLLENFTSEAAFIENLRGGFRENLIYTYIGPVLVSVNPYRDLQI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                77.2%;
99.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ω,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 4167; DB 2;
Pred. No. 6.3e-259;
3; Mismatches 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    homology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  chain I;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PIDN:CAA67956.1;
type cochlea; de
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        <MMO>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  myosin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                cochlea; dev stage adult
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  motor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           807;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         cochlear unconventional
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PID:g1924961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    c.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            08-Sep-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Vago,
                                                     676
                                                                               600
                                                                                                         616
                                                                                                                                  540
                                                                                                                                                                                      480
                                                                                                                                                                                                             496
                                                                                                                                                                                                                                        420
                                                                                                                                                                                                                                                                   436
                                                                                                                                                                                                                                                                                            360
                                                                                                                                                                                                                                                                                                                     376
                                                                                                                                                                                                                                                                                                                                                                        316
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            homology
                                                                                                                                                                                                                                                                                                                                                300
                                                                                                                                                                                                                                                                                                                                                                                                     240
                                                                                                                                                                                                                                                                                                                                                                                                                              256
                                                                                                                                                                                                                                                                                                                                                                                                                                                       180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      76
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    P.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Hamel
```

```
R. Strom Morgan, N.; Skovronsky, D.M.; Artavanis-Tsakonas, S.; Mooseker, M.S.
J. Mol. B101. 239, 347-356, 1994
A; Title: The molecular cloning and characterization of Drosophila melanogaster myosin-IA
A; Reference number: S45574
A; Accession: S45574
A; Status: preliminary
A; Status: preliminary
A; Status: preliminary
A; Molecule type: mRNA
A; Residues: 1-1026 <STR>
A; Cross-references: GB:U07596; NID:9466257; PIDN:AAA19591.1; PID:9466258
C; Superfamily: brush border myosin heavy chain I; myosin motor domain homology
C; Keywords: nuclectide binding; P-loop
F:14-691/Domain: myosin motor domain homology <MMOT>
F:105-112/Region: nuclectide-binding motif A (P-loop)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 6
$4574

System IB - fruit fly (Drosophila melanogaster)
C:Species: Drosophila melanogaster
C:Date: 19-Mar-1997 #sequence_revision 19-Mar-1997
Qy
                          8
                                                Š
                                                                      B
                                                                                                  Š
                                                                                                                             Ъ
                                                                                                                                                 δ
                                                                                                                                                                             Ъ
                                                                                                                                                                                                     ő
                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                 Вb
                                                                                                                                                                                                                                                                                                       δÃ
                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                    Db
                                                                                                                                                                                                                                                                                                                                                                                                           80
                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 C; Accession: S45574
R; Strom-Morgan, N.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
  557
                            477
                                                                                                     437
                                                                                                                                                      377
                                                                                                                                                                                 300
                                                                                                                                                                                                                                                         257
                                                                                                                                                                                                                                                                                   181
                                                                                                                                                                                                                                                                                                            197
                                                                                                                                                                                                                                                                                                                                     121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         797
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           737
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      661
                                                    497
                                                                                                                              360
                                                                                                                                                                                                                                 241
                                                                                                                                                                                                                                                                                                                                                             137
                                                                                                                                                                                                                                                                                                                                                                                       61
                                                                                                                                                                                                                                                                                                                                                                                                                77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  17
                                                                                                                                                                                                                                                                                                                                                                                                                                        _
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ocal
                                                                                                                                                                                                                                                                                                                                                                                                                                     FLLNLRRQLPRNVLDTSWPTPPPALRE
                                                                          SEQEEYEAEGIAWEPVQYFNNKIICDLVEEKFKGIISILDEECLRPGEATDLTFLEKLED 496
                                                                                                                                        KINRSLASKDAESPSWRSTTVLGLLDIYGFEVFQHNSFEQFCINYCNEKLQQLFIELTLK 436
                                                                                                                                                                                             KYLTRLLGVEGTTLREALTHRKIIAKGEELLSPLNLEQAAYARDALAKAVYSRTETWLVR 376
                                                                                                                                                                                                                                                        SSINDKSDWKVMRKALSVIDFTEDEVEDLLSIVASVLHLGNIHFAADEDSNAQVTTENQL
                                                                                                                                                                                                                                                                                   NILNYLLEKSRVVAQMGGERNFHIFYQLLAGADEALLQELGLERALDTYSYLTDGLNGTV
                                                                                                                                                                                                                                                                                               HILSYLLEKSRVVHQNHGERNFHVFYQLLEGGEEETLRRLGLERNPQSYLYLVKGQCAKV
                                                                                                                                                                                                                                                                                                                                   FIAACSGNQTTVEGVKDKLLKSNPVLEAFGNAKTNRNDNSSRFGKYMDIQFDFKGAPIGG
                                                                                                                                                                                                                                                                                                                                                FYAETCPAPERGGAVRDRLLQSNPVLEAFGNAKTLRNDNSSRFGKYMDVQFDFKGAPVGG 196
                                                                                                                                                                                                                                                                                                                                                                                   RVKRSATCIQSWWRGTLGRRKAAKRKWAAQTIRRLIRGFILRHSPRCPENAFFLDHVRAS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RVKRSAICIOSWWRGTLGRRKAAKRKWAAQTIRRLIRGFILRHSPRCPENAFFLDHVRAS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SSMNPIMAQCFDKSELSDKKRPETVATQFKMSLLQLVEILRSKEPAYIRCIKPNDAKQPG
                         KLAQHHHYVCHEKAPAHIKKIMLRDEFRLVHYAGEVTYSVNGFLDKNNDLLFRDLKETLS
                                      RLNISLQAKETRA---SRNNVMGILDIYGFEIFQKNSFEQFCINFCNEKLQQLFIELTLK
                                                                                                                                                                              VTAARLLGVNASELEAALTHRTIDARGDVVTSPLNQELAIYARDALAKAVYDRLFSWLVQ
                                                                                                                                                                                                                                TSINDADSFKQVQQALTVIDFGKEEQREIFGIVASILHLGNVGF-TEVEGNAKVNSRDLV
                                                                                                                                                                                                                                                                                                                                                                                                             YSRQHMERYRGVSFYEVPPHLFAVADTVYRALRTERRDQAVMISGESGAGKTEATKRLLQ 136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity 51.5
33; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        48.8%; Score 2632; DB 2; 51.5%; Pred. No. 2.1e-160; tive 177; Mismatches 300;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         823
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 807
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         #text_change 02-Feb-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 1026;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          24;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                            476
                                                                                                                                                                                                                                                                                                                                                                                     120
                                                                                                                                                                                                                                                                                                                                                                                                                                        60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                76
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           796
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     720
616
                                                                                                                                                                                359
                                                                                                                                                                                                                                299
                                                                                                                                                                                                                                                         316
                                                                                                                                                                                                                                                                                 240
                                                                                                                                                                                                                                                                                                                                   180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT
B45438
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Qy
Вþ
                    δÃ
                                                 B
                                                                        δÃ
                                                                                                  В
                                                                                                                        Qy
                                                                                                                                                    В
                                                                                                                                                                             Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      QУ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    B
                                                                                                                                                                                                                  Query Match
Best Local
                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          897
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     855
                                                                                                                                                                              162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              717
181
                         342
                                                                                                                             222
                                                                                                    61
                                                                                                                                                      _
```

```
myosin I beta, MMI beta - mouse (fragment)
C:Species: Mus musculus (house mouse)
C:Decies: Mus musculus (house mouse)
C:Decies: Mus musculus (house mouse)
C:Decies: Mus musculus (house mouse)
C:Caccession: B45438
R:Sherr, E.H.; Joyce, M.P.; Greene, L.A.
J. Cell Biol. 120, 1405-1416, 1993
A:Title: Mammalian myosin I alpha, I beta, and I gamma: new widely (A:Reference number: A45438; MUID:93194946; PMID:8449986
A:Reference number: A45438; MUID:93194946; PMID:8449986
A:Status: preliminary; not compared with conceptual translation
A:Molecule type: nucleic acid
A:Residues: 1-448 (SHE)
A:Note: sequence extracted from NCBI backbone (NCBIP:131911)
C:Superfamily: brush border myosin heavy chain I; myosin motor doma-
F:1-448/Domain: myosin motor domain homology (fragment) <MMOT>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1011 PGVVRDK-GHLVII 1023
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Match 41.7%;
Local Similarity 97.1%;
les 435; Conservative
                                                                                                                                                                                                                                                                                                                                                                          VEDLLSIVASVLHLGNIHFAADEDSNAQVTTENQLKYLTRLLGVEGTTLREALTHRKIIA 341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LLITKAKNGHLAVV 1037
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KGYKPRPRQLLLTPSAVVIVEDAKVKQ-----RIDYANLTGISVSSLSDSLFVLHVQR 964
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KGEELLSPLNLEQAAYARDALAKAYYSRTFTWLVRKINRSLASKDAESPSWRSTTVLGLL 401
                                                                                                                                                                                                                                                                                     YQLLEGGEEETLRRLGLERNPQSYLYLVKGQCAKVSSINDKSDWKVMRKALSVIDFTEDE 281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DLKKDKGDLILIIPRIIEFSTYIIDTVGTASIVSIVDRNSLEHNVVKGKGGVIDIQTGAE 1010
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EDNKQKGDVVLQSDHVIETLTKTALSADRVNNINI-NQGSITFAGGPGRDGIIDFTSGSE 1023
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HGYKSRDRFILLSNKAIYVLDGKTYKQKHRLPLDKIDF----TLTNHNDDLMVIRIPL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KVLAEKVFKGKKNNYASSVSTWFQEDRIPKEHIQRVNDFVASTFGSEQLKYQSFCTKFDR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KAVASEIFKGKKDNYPQSVPRLFISTRLGTEEI---SPRVLQSLGSEPIQYAVPVVKYDR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ASFLLNLRRQLPRNVLDTSWPTPPPALREASELLRELCMKNMVWKYCRSISPEWKQQLQQ 854
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FLRVKRSAICIQSWWRGTLGRRKAAKRKWAAQTIRRLIRGFILRHSPRCPENAFFLDHVR 794
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VAVLVRHLGYKPEEYKMGRTKIFIRFPKTLFATEDSLEVRRQSLATKIQAAWRGFHWRQK 734
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VFNDELVLHQVKYLGLMENLRVRRAGFAYRRTYELFLERYKSLSKSTWPNYKGPGGPKAG
KGEELLSPLNLEQAAYARDALAKAVYSATFTWLVRKINRSVPAKDAESPSWRSTTVLGLL
                                                                                                                        VEDLLSIVASVLHLGNIHFAADEDSNAQVTTENQLKYLTRLLGVEGTTLREALTHRKIIA 180
                                                                                                                                                                                                                                                    YQLLEGGEEEALRRLGLERNPQSYLYLVKGQFAKVSSINDKSDWKLLRKALSVIDFTEDE 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RMWLLRLAKELPTKVLDKSWPHAPGHCEEASGILHRLHRLHLARIYRLKLTPQQKRQFEL 836
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   YLKLRAQVIIMQSYCRRKLAQQAAKKRREAADKIRAFIKGFITRNDAPNGFNEEFIANAK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VQQLVKDLGWDEEKYRVGETKLFIRWPRTLFDTEDAYQEKKHEIAAIIQAHWKGLMQRRK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 2252; DB 2;
Pred. No. 1.3e-136;
6; Mismatches 7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   and I gamma: new widely PMID:8449986
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 448;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            31-Jan-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                expressed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            homology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            911
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        656
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      674
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    596
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  896
240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                genes
```

O.f

Db 373 KAQTK Qy 443 EAEGIA Db 428 IREDII	SKE SKE	Qy 87 GVSFY Db 74 NRNFY QY 147 RGGAV Db 134 EVNQV QY 207 RVVHQ Db 194 RVVKQ	Query Match Dest Local S. Matches 463 Qy 27 VGVQI Db 15 IGVGI	RESULT 8 B45439 myosin-I, Myr C;Species: Rat C;Date: 21-Sep C;Accession: B R;Ruppert, C; J. Cell Biol. A;Title: Ident A;Teference nu A;Accession: B A;Status: prel A;Molecule typ A;Residues: 1- A;Note: sequen C;Superfamily: C;Keywords: nu F;18-688,Domail	Oy 402 DIYO Db 241 DIYO Oy 462 DLVI Db 301 DLVI Oy 522 EFRI Oy 582 ATOP Oy 582 ATOP
TKVRKKVMGVLDIYGFEIFEDNSFEQFIINYCNEKLQQIFIELTLKEEQEEY 42 GIAWEPVQYFNNKIICDLVEEKFKGIISILDEECLRPGEATDLTFLEKLEDTVKPHP 50	RKALSVIDETEDEVEDLLSIVASVLHLGNIHFAADEDSNAQVTTENQLKYLTRL : : : : : : : : : :	FYEVPPHLEAVADTVYRALRTERRDQAVMISGESGAGKTEATKRLLQFYAETCPAPE 1 : : : : : : : :	2109; DB 2; NO. 7.5e-127 smatches 346 JYTYIGPVLVSV ::	RESULT 8 BA5439 MYSSIN-I, Myr Ic (alternatively spliced) - rat C;Species: Rattus norvegicus (Norway rat) C;Date: 21:Sep-1993 #sequence_revision 18-Nov-1994 #text_change 02-Feb-200 C;Accession: B45439 R;Ruppert, C; Kroschewski, R; Bahler, M. J. Cell Biol. 120, 1393-1403, 1993 A;Title: Identification, characterization and cloning of myr 1, a mammalia A;Reference number: A45439; MUID:93194945; PMID:8449985 A;Roterization: B45439 A;Status: preliminary A;Molecule type: mRNA; protein A;Residues: 1-1078 <rup> A;Note: sequence extracted from NCBI backbone (NCBIN:128986, NCBIP:128986) C;Superfamily: brush border myosin heavy chain I; myosin motor domain homo C;Keywords: nucleotide binding; P-loop F;18-688/Domain: myosin motor domain homology <mmot> F;108-115/Region: nucleotide-binding motif A (P-loop)</mmot></rup>	DIYGFEVFQHNSFEOFCINYCNEKLOQLFIELTLKSEQEEYEAEGIAWEPVQYFNNKIIC 461 11
·			19;	n myosin-I.	

	VA 1076	1075 VA	DЬ
	VA 1038	1037	Qy
1074	TLSQTKQKLNIEISDEFLVQFRQDKVCVKFIQGNQKNGSVPTCKRKNNRLLE	1023	Db
1036	ALSADRVN-NININQGSITFAGGPGRDGIIDFTSGSELLITKAKNGHLAV 1036	988	Qy
1022	KSGQIKSEVPLVDVTKVSMSSQNDGFFAVHLKEGSEAASKGDFLFSSDHLIEMATKLYRT	963	Db
987	-DAKVKQRIDYANLTGISVSSLSDSLFVLHVQR-EDNKQKGDVVLQSDHVIETLTKT	933	Qy
962	QGAYLEINKNPKYKKLKDAIEEKIIIAEVVNKINRANGKSTSRIFLLTNNNLLLADQ	906	рЬ
932	ISTRLGTEEISPRVLQSLGSEPIQYAVPVVKYDRKGYKPRPRQLLLTPSAVVIVE-	878	QY
905	FLDSTHKELKRIFHLWRCKKYRDQFTDQQKLIYEEKLEASELFKDKKALYPSSVGQPF	848	DЪ
877		821	QY
847	AYWHGTQVRREYRKFFRANAGKKIYEFTLQRIVQKYLLEMKNKMPSLSPIDKNWPSRPYL	788	Ф
820		788	Qy
787		728	Db
787		739	Qy
727	FNELEIPVEEYSFGRSKIFIRNPRTLFQLEDLRKQRLEDLATLIQKIYRGWKCRTHFLLM	668	Db
738	VRHLGYKPEEYKMGRTKIFIREPKTLFATEDSLEVRRQSLATKIQAAWRGFHWRQKFLRV	679	Qy
667	SESLVCHQIRYLGLLENVRVRRAGYAFRQAYEPCLERYKMLCKQTWPHWKGPARSGVEVL	608	Db
678	DEVLIRHQVKYLGLMENLRVRRAGFAYRRKYEAFLQRYKSLCPETWPMWAGRPQDGVAVL	619	Qy
607		548	Дb
618		561	Qy
547	8 HFESRMSKCSRFLNDTTLPHSCFRIQHYAGKVLYQVEGFVDKNNDLLYRDLSQAMMKAGH 547	488	DЬ
560	3 HFLTHKLADQKTRKSLDRGEFRLLHYAGEVTYSVTGFLDKNNDLLFRNLKETMCSSMN	503	VΥ

Qy DЬ QΥ Ъ VΩ

RESULT 9
A29483
MyOSin heavy chain I, brush border - bovine
N;Alternate names: myosin I heavy chain-like protein, MIHC
N;Contains: myosin ATPase (EC 3.6.4.1)
C;Species: Bos primigenius taurus (cattle)
C;Date: 31-Dec-193 #sequence_revision 31-Dec-1993 #text_change 19-Apr-2002
C;Accession: A29483; JX0208
R;HoShimaru, M; Nakanishi, S.
J. Biol. Chem. 262, 14632, 1987
A;Title: Identification of a new type of mammalian myosin heavy chain by molecular cl
A;Reference number: A29483; MUID:88033016; PMID:3667594
A;Naccession: A29483

A: Molecule type: mRNA
A: Residues: 1-1043 <HOS>
A: Molecule type: mRNA
A: Residues: 1-1043 <HOS>
A: Cross-references: GB:J02819; NID:g163405; PIDN:AAA30658.1; PID:g163406
R: KRAWAKAMI, H.; Moriyoshi, K.; Utsumi, T.; Nakanishi, S.
Biochem. 111, 302-309, 1992
A: Title: Structural organization and expression of the gene for bovine myosin I heavy
A: Reference number: JX0208
A: Reference number: JX0208; MUID:92268028; PMID:1587791
A: Accession: JX0208
A: Molecule type: DNA
A: Residues: 1-789 <KAW>
A: Note: nucleotide sequence is not complete
C: Genetics:
A: Introns: 38/3; 77/2; 109/1: 144/1; 159/3; 181/1: 214/1; 248/3; 298/1; 337/3; 366/3;
C: Superfamily: brush border myosin heavy chain I; myosin motor domain homology

```
20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C:Keywords: actin binding; hydrolase; intestine; nucl. r;11-681/Domain: myosin motor domain homology <MMOT> F;101-108/Region: nucleotide-binding motif A (P-loop) F;572-593/Region: actin binding #status predicted F;723-1043/Domain: carboxyl-terminal <CTD>
                                                                                                                        δ
                                                                                                                                                                              δõ
                                                                                                                                                                                                                 дb
                                                                                                                                                                                                                                       δõ
                                                                                                                                                                                                                                                                    DЬ
                                                                                                                                                                                                                                                                                              õ
                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                           망
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            д
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           al al
                S
                                             밁
                                                                 Ş
                                                                                                Ъ
                                                                                                                                                        Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        :107/Binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                    618
                                                                                                                                                                                                                                                                                                                               540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                127
                 899
                                                                       843
                                                                                                                               789
                                                                                                                                                         720
                                                                                                                                                                                     738
                                                                                                                                                                                                                 660
                                                                                                                                                                                                                                             678
                                                                                                                                                                                                                                                                        000
                                                                                                                                                                                                                                                                                                                                                         560
                                                                                                                                                                                                                                                                                                                                                                                      481
                                                                                                                                                                                                                                                                                                                                                                                                                 503
                                                                                                                                                                                                                                                                                                                                                                                                                                            421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        QVNSVKEQLLQSNPVLEAFGNAKTIRNNNSSRFGKYMDIEFDFKGFPLGGVITNYLLEKS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RGGAVRDRLLQSNPVLEAFGNAKTLRNDNSSRFGKYMDVQFDFKGAPVGGHILSYLLEKS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DYTFYELKPHIYALANMAYQSLRDRDRDQCILITGESGAGKTEASKLVMSYVAAVCGKGE
                                                                                                                                                                                     VKRSAICIQSWWRGTLGRRKAAKRKWAAQTIRRLIRGFILRHSPR-----
                                                                                                                                                                                                                               LVRHLGYKPEEYKMGRTKIFIRFPKTLFATEDSLEVRRQSLATKIQAAWRGFHWRQKFLR
                                                                                                                                                                                                                                                                                    FDEVLIRHQVKYLGLMENLRVRRAGFAYRRKYEAFLQRYKSLCPETWPMWAGRPQDGVAV
                                                                                                                                                                                                                                                                                                                             HPLLRSLFPEGDPKQASLKRPPTAGAQFKSSVTTLMKNLYSKNPNYIRCIKPNEHQQRGH
                                                                                                                                                                                                                                                                                                                                             NPIMAQCFDKSE--LSDKKRPETVATQFKMSLLQLVEILRSKEPAYIRCIKPNDAKQPGR
                                                                                                                                                                                                                                                                                                                                                                                                                                            KREGIPWVKVEYFDNGIICNLIEHNQRGILAMLDEECLRPGVVSDSTFLAKLNQLFSKHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EAEGIAWEPVQYFNNKIICDLVEEKFKGIISILDEECLRPGEATDLTFLEKLEDTVKPHP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KVGTGE-----KRKVMGVLDIYGFEILEDNSFEQFVINYCNEKLQQVFIEMTLKEEQEEY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ASKDAESPSWRSTTVLGLLDIYGFEVFQHNSFEQFCINYCNEKLQQLFIELTLKSEQEEY 442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VLQSAMTVIGFSDEEIRQVLEVAALVLKLGNVELINEFQANGVPASGIRDGRGVQEIGEL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VMRKALSVIDFTEDEVEDLLSIVASVLHLGNIHFAADEDSN----AQVTTENQLKYLTRL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RVVHQNHGERNFHVFYQLLEGGEEETLRRLGLERNPQSYLYLVKGQCAKVSSINDKSDWK 266
              --PIQYAVPVVKYDRKGYKPRPRQLLLTPSAVVI--VEDAKVKQRIDYANLTGISVSSLS
                                          KFRDQLSPKQVEVLREKLCASELFKGKKASYPQSVPIPFHGDYIGLQR-NPKLQKLKGGE
                                                                    ----SISPEWKQQLQQKAVASEIFKGKKDNYPQSVPRLFISTRLGTEEISPRVLQSLGSE
                                                                                                  YKSMVQ-KFLLGLKNDLPSPSILDKKWPSAPYKYFNTANHELQRLFHQ-----
                                                                                                                            FLDHVRASFLLNLRRQLPR-NVLDTSWPTPP-----PALREASELLRELCMKNMVWKYCR 842
                                                                                                                                                        MRKSQIVISSWFRGNMQKKHYRKMKASALLIQAFVRGWKARKNYRKYFRSGAALILSNFI 779
                                                                                                                                                                                                               VLGELSMSSEELAFGKTKIFIRSPKTLFYLEEQRRLRLQQLATLIQKTYRGWRCRTHYQL
                                                                                                                                                                                                                                                                       FSFELVSVQAQYLGLLENVRVRRAGYAYRQAYGSFLERYRLLSRSTWPRWNGGDQEGVEK
                                                                                                                                                                                                                                                                                                                                                                                                               HFLTHKLADQKTRK----SLDRGEFRLLHYAGEVTYSVTGFLDKNNDLLFRNLKETMCSSM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VGLNSVELERALCSRTMETAKEKVVTTLNVIQAQYARDALAKNIYSRLFNWLVNRINESI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RVVKQLEGERNFHIFYQLLAGADAQLLKALKLERDTGGYAYL-NPDTSRVDGMDDDANFK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        site: ATP (Lys) #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               39.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    185;
  _
=
=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 2106.5; DE Pred. No. 1e-126;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          intestine; nucleotide
::
--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    330;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             binding; P-loop
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1043;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  65;
                                                                                                  WK-CK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                              719
                                                                      898
                                                                                                                                                                                                                                                                       659
                                                                                                                                                                                                                                                                                                                                                         617
                                                                                                                                                                                                                                                                                                                                                                                     539
                                                                                                                                                                                                                                                                                                                                                                                                                 559
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      86
                954
                                                                                                  830
                                                                                                                                                                                     788
                                                                                                                                                                                                                                                                                                   677
                                                                                                                                                                                                                                                                                                                                                                                                                                            480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  21;
```

```
RESULT
C45439
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A;Status: preliminary
A;Molecule type: mRNA; protein
A;Residues: 1-1107 < RUP>
A;Residues: 1-1107 < RUP>
A;Note: sequence extracted from NCBI backbone (NCBIN:128956, NCBIP:128984)
                Ş
                                                                      Qy
                                                                                                   DЬ
                                                                                                                              δÃ
                                                                                                                                                           밁
                                                                                                                                                                                     ρ
                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                              Qy
                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                       QΥ
                                                                                                                                                                                                                                                                                                                                     멍
                                                                                                                                                                                                                                                                                                                                                              Qy
                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                       δÕ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        C;Superfamily: brush border myosin heavy chain I; myo C;Keywords: nucleotide binding; P-loop F;18-688/Domain: myosin motor domain homology <MMOT> F;108-115/Region: nucleotide-binding motif A (P-loop)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A; Reference number: A45439; A; Accession: C45439
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A;Title: Identification, characterization and cloning of myr A;Reference number: A45439; MUID:93194945; PMID:8449985
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   R;Ruppert, C.; Kroschewski, R.; Bahler, J. Cell Biol. 120, 1393-1403, 1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C;Date: 21-Sep-1993 #sequence_revision 18-Nov-1994 C;Accession: C45439
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            myosin-I, Myr lb (alternatively spliced) - rat
C; Species: Rattus norvegicus (Norway rat)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1010
                561
                                            488
                                                                       503
                                                                                                     428
                                                                                                                                443
                                                                                                                                                            373
                                                                                                                                                                                        383
                                                                                                                                                                                                                   313
                                                                                                                                                                                                                                                 323
                                                                                                                                                                                                                                                                            253
                                                                                                                                                                                                                                                                                                                                     194
                                                                                                                                                                                                                                                                                                                                                                 207
                                                                                                                                                                                                                                                                                                                                                                                             134
                                                                                                                                                                                                                                                                                                                                                                                                                        147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          950
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 068
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             15
                                                                                                                                                                                                                                                                                                                                                                                                                                                    74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local Similarity es 463; Conserv
GVSFYEVPPHLFAVADTVYRALRTERRDQAVMISGESGAGKTEATKRLLQFYAETCPAPE
                                                                                                                    EAEGIAWEPVQYFNNKIICDLVEEKFKGIISILDEECLRPGEATDLTFLEKLEDTVKPHP
                                                                                                                                                                                                                  IGVGDTVLLEPL-NEETFIDNLKKRFDHNEIYTYIGSVVISVNPYRSLPIYSPEKVEDYR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VGVQDFVLLENFTSEAAFIENLRRRFRENLIYTYIGPVLVSVNPYRDLQIYSRQHMERYR 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GSLTVKVIQGPGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GSIT--FAGGPGRDG
                                                                       HFLTH--KLADQKTRKSLDRGEFRLLHYAGEVTYSVTGFLDKNNDLLFRNLKETMCSSMN
                                                                                                   IREDIEWTHIDYFNNAIICDLIENNTNGILAMLDEECLRPGTVTDETFLEKLNQVCATHQ
                                                                                                                                                                                                                                                                            TVRNAMQIVGFSDPEAESVLEVVAAVLKLGNIEFKPESRMNGLDESKIKDKNELKEICEL
                                                                                                                                                                                                                                                                                                       VMRKALSVIDFTEDEVEDLLSIVASVLHLGNIHFAADEDSN----AQVTTENQLKYLTRL
                                                                                                                                                                                                                                                                                                                                     RVVKQPRGERNFHVFYQLLSGASEELLHKLKLERDFSRYNYL-SLDSAKVNGVDDAANFR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DGLFSLHLSEISSVGSKGEFLLVSEHVIELLTKICRATLDATQMQLPVTVTEEFSVKFKE 1009
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DSLFVLHVQREDN-KQKGDVVLQSDHVIETLTK---TALSADRVN-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EGPILMAETVVKVNRGNAKTSSRILLLTKGHVIITDMKNPQAKTVIPLNSLAGVSVTSFK
                                            HFESRMSKCSRFLNDTTLPHSCFRIQHYAGKVLYQVEGFVDKNNDLLYRDLSQAMWKAGH
                                                                                                                                                                                                                                                                                                                                                              RVVHQNHGERNFHVFYQLLEGGEEETLRRLGLERNPQSYLYLVKGQCAKVSSINDKSDWK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative 183;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  38.88;
41.78;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1014
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 2094.5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .6e-126;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     I; myosin motor domain homology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    346;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               #text_change
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels 119;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ٠,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ONININO-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                02-Feb-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      mammalian myosin-I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1001
                618
                                                                       560
                                                                                                   487
                                                                                                                                                           427
                                                                                                                                                                                                                                                                                                                                                                                            193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 949
                                           547
                                                                                                                                                                                     442
                                                                                                                                                                                                                                                                                                                                                               266
                                                                                                                                                                                                                                                                                                                                                                                                                       206
                                                                                                                                                                                                                   372
                                                                                                                                                                                                                                                382
                                                                                                                                                                                                                                                                            312
                                                                                                                                                                                                                                                                                                       322
                                                                                                                                                                                                                                                                                                                                     252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   19;
```

```
Risherr, E.H.; Joyce, M.P.; Greene, L.A.
J. Cell Blol. 120, 1405-1416, 1993
A:Title: Mammalian myosin I alpha, I beta, and I gamma: new widely expressed genes (A.Reference number: A45438; MUID:93194946; PMID:8449986
A:Reference number: A45438; MUID:93194946; PMID:8449986
A:Residues: A45438
A:Status: preliminary
A:Molecule type: nucleic acid
A:Residues: 1-1079 < CHED
A:Coss-references: GB:L00923; NID:9200008; PIDN:AAA39800.1; PID:9200009
A:Experimental source: brain
A:Noic: sequence extracted from NCBI backbone (NCBIN:129047, NCBIP:129048)
C:Superfamily: brush border myosin heavy chain I; myosin motor domain homology
F:18-689/Comain: myosin motor domain homology < MMOT>
F:108-115/Region: nucleotide binding: p-loop
O:Reywords: nucleotide binding: p-loop
                    В
                                                           Ş
                                                                                                       В
                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 11
A45438
myosin I alpha chain - mouse
C:Species: Mus musculus (house mouse)
C:Date: 21-Sep-1993 #sequence_revision 18-Nov-1994 #text_change 02-Feb-2001
C:Accession: A45438
C:Accession: A45438
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         д
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δ
                                                                                                                                                                                          Query Match
Best Local S
Matches 463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δĀ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1083 QGNQKNGSVP-----TCKRKNNRLLEVA 1105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1008 GGPGRDGIIDFTSGSELLITKAKNGHLAVVA 1038
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1023 KEGSEAASKGDFLFSSDHLIEMATKLYRTTLSQTKQKLNIEISDEFLVQFRQDKVCVKFI 1082
15
                                                                                                                                                27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   963 QR-EDNKOKGDVVLQSDHVIETLTK---TALSADRVN-NINI-------NQGSITFA 1007
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               963 VVNKINRANGKSTSRIFLLTNNNLLLADQKSGQIKSEVPLVDVTKVSMSSQNDGFFAVHL 1022
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                793
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         788 AYWHGTQARRELKRLKEEARRKHAVAVIWAYWLGLKVRREYRKFFRANAGKKIYEETLQR 847
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              728
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        739 KRSAICIOSWWRGTLGRRKAAKRKWAAQTIRRLIRGF-----ILRHSPRCPENA----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         679 VRHLGYKPEEYKMGRTKIFIRFPKTLFATEDSLEVRROSLATKIQAAWRGFHWRQKFLRV 738
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           548 ALIKSLEPEGNPAKVNLKRPPTAGSQFKASVATLMKNLQTKNPNYIRCIKPNDKKAAHIF 607
                                                                                                              VGVODEVLLENETSEAAFIENLRRRFRENLIYTYIGPVLVSVNPYRDLQIYSRQHMERVR 86
                                                                                         IGVGDMVLLEPL-NEETFIDNLKKREDHNEIYTYIGSVVISVNPYRSLPIYSPEKVEDYR 73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VRASFLLNLRRQLPR-NVLDTSWPTPPPALREASELLRELCMKNMVW----KYCRSISPEW 848
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PVVKYDRKGYKPRPRQLLLTPSAVVIVE--DAKVKQRIDVANLTGISVSSLSDSLFVLHV 962
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KLIYEEKLEASELFKDKKALYPSSVGQPFQGAYL - - - EINKNPKYKKLKDAIEEKIIIAE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KQQLQQKAVASEIFKGKKDNYPQSVPRLFISTRLGTEEISP----RVLQSLGSEPIQYAV 904
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      IVQKYLLEMKNKMPSLSPIDKNWPSRPYLFLDSTH--KELKRIFHLWRCKKYRDQFTDQQ 905
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              KRSQVVIAAWYRRYAQQKRYQQIKSSALVIQSYIRGWKARKILRELKHQKRCKEAATTIA 787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FNELEIPVEEYSEGRSKIFIRNPRTLEQLEDLRKQRLEDLATLIQKIYRGWKCRTHFLLM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FFLDH 792
                                                                                                                                                                                 h 38.6%; Score 2081.5; DB 2; Similarity 42.7%; Pred. NO. 4.3e-125; 63; Conservative 181; Mismatches 347;
                                                                                                                                                                                 Indels 93;
                                                                                                                                                                                                                          Length 1079;
                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      962
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            787
                                                                                                                                                                              20;
```

	AVVA 1038 	1035 1074	§ 5
1034 1073	-TALSADRVN-NININQGSITFAGGPGRDGIIDFTSGSELLITKAKNGHL 1	987 1022	₽. <i>\</i>
021	EDAKVKQRIDYANLTGISVSSLSDSLFVLHVQR-EDNKQKGDVVLQSDHVIETLTK 9 : : : :	் வ	Фb
31	ELSTRUGTEELSPRVLQSLGSEBTQYAVPVVKYDRKGYKPRPRQLLLTPSAVVIV 9 FQGAYLEINKNPKYKKLKDAIEEKIIIAEVVNKINRANGKSTSRIFLLTNNNLLLA 9	0 \	, B 7
375	ALREASELLRELCMKNNYW KYCRSISPEWKQQLQQKAV :: : : :: : LELDSTH KELKRIFHLWRCKKYRDQFTDQQKLIYEEKLE	847	P 5
318	AAYWLGLKV	787	B &
787 786	(VKRSAICIQSWWRGTLGRRKAAKRKWA 		9 da 64
736 726	KPREYKMGRTKIFIRFPKTLFATEDSLEVRRQSLATKIQAAWRGFHWRQKFL : :	5 65 7	D
676 666	EVLIRHOYKYLGIMENLRYRRAGFAYRRKYEAFLQRYKSLCPETWPMWAGRPQDGVA 		Db Cy
616 606	MRITMAQCEDKSELSDKKRPETVATQFKMSLLQLVEILRSKEPAYIRCIKPNDAKQPG : :: : : :	547	90
558 546	HPHFTHKLADKTRKSLDRGBFRLLHYAGEVTYSVTGFLDKNNDLLFRNLKETMCSS	1 00 0	90
500 486	EYEAEGIAMEPVQYFNNKIICDLVEEKFKGIISILDEECLRPGEATDLTFLEKLEDTVKP	441	Db Oy
440 426	SLASKDAESPSWRSTTVLGLLDIYGFEVFOHNSFEOFCINYCNEKLQOLFIELTLKSEQE : ::	38:	Db Qy
380 _. 371	RLLGVEGTTI : RPASVK-VVI	313	P 64
320 312	VMRKA : TVRNA	267 253	Ωу
266 252			ОУ
206 193		147 134	ОУ

RESULT 12 A45439

myosin I heavy chain - C; Species: Rattus norve

ain - rat
norvegicus (Norway rat)

```
submitted to the EMBL Data Library, September 1992
A; Reference number: $29984
A; Accession: $29984
A; Status: preliminary
A; Molecule type: mRNA
A; Mesidues: 1-1136 <RU2>
A; Cross-references: EMBL; X68199; NID:956732; PIDN:CAA48287.1; PID:956733
A; Cross-references: EMBL; X68199; NID:956732; PIDN:CAA48287.1; PID:956733
C; Superfamily: brush border myosin heavy chain I; myosin motor domain hom C; Keywords: nucleotide binding; P-loop
F; 18-688/Domain: myosin motor domain homology <MMOT>
F; 108-115/Region: nucleotide-binding motif A (P-loop)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             C:Date: 21-Sep-1993 #sequence_revision 18-Nov-1994 #text_change 02-Feb-2001 C;Accession: A45439; S2984 R:Ruppert, C.; Kroschewski, R.; Bahler, M. J. Cell Biol. 120, 1393-1403, 1993 A:Title: Identification, characterization and cloning of myr 1, a mammalian A:Reference number: A45439; MUID:93194945; PMID:8449985 A:Accession: A45439 A:Status: preliminary A:Residues: preliminary A:Molecule type: mRNA; protein A:Residues: I-1136 <RUP> A:Rocession: GB:X68199; NID:956732; PIDN:CAA48287.1; PID:956733 A:Note: sequence extracted from NCBI backbone (NCBIN:128956, NCBIP:128961) R:Ruppert, C. C. Debrich Color of the colo
                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δ
      몽
                                                           Ş
                                                                                                                             DЬ
                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                                                                                                                                                                   망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
      809
                                                                                                                                                                                                                                                                         488
                                                                                                                                                                                                                                                                                                                                    503
                                                                                                                                                                                                                                                                                                                                                                                                          428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  21-Sep-1993 #sequence_revision 18-Nov-1994 #text_change 02-Feb-2001 sion: A45439; S29984
                                  DEVLIRHQVKYLGLMENLRVRRAGFAYRRKYEAFLQRYKSLCPETWPMWAGRPQDGVAVL
                                                                                                                                                                    HFESRMSKCSRFLNDTTLPHSCFRIQHYAGKVLYQVEGFVDKNNDLLYRDLSQAMWKAGH
                                                                                                                                                                                                                                                                                                        HFLTH--KLADQKTRKSLDRGEFRLLHYAGEVTYSVTGFLDKNNDLLFRNLKETMCSSMN 560
                                                                                                                                                                                                                                                                                                                                                                                                                                      EAEGIAWEPVQYFNNKIICDLVEEKFKGIISILDEECLRPGEATDLTFLEKLEDTVKPHP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ASKDAESPSWRSTTVLGLLDIYGFEVFQHNSFEQFCINYCNEKLQQLFIELTLKSEQEEY 442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TVRNAMQIVGFSDPEAESVLEVVAAVLKLGNIEFKPESRMNGLDESKIKDKNELKEICEL 312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VMRKALSVIDFTEDEVEDLLSIVASVLHLGNIHFAADEDSN----AQVTTENQLKYLTRL 322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RVVHQNHGERNFHVFYQLLEGGEEETLRRLGLERNPQSYLYLVKGQCAKVSSINDKSDWK 266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EVNQVKEQLLQSTPVLEAFGNAKTVRNDNSSRFGKYMDIEFDFKGDPLGGVISNYLLEKS 193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NRNFYELSPHIFALSDEAYRSLRDQDKDQCILITGESGAGKTEASKLVMSYVAAVCGKGA 133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               IGVGDTVLLEPL-NEETFIDNLKKRFDHNEIYTYIGSVVISVNPYRSLPIYSPEKVEDYR 73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VGVQDFVLLENFTSEAAFIENLRRRFRENLIYTYIGPVLVSVNPYRDLQIYSRQHMERYR 86
SESTACHOILKITCHOLLENAKARAGAALKOAAKEACTERAKWICKOIMBHMKGBARSGAEAL
                                                                                                                                    ALIKSLFPEGNPAKVNLKRPPTAGSQFKASVATLMKNLQTKNPNYIRCIKPNDKKAAHIF
                                                                                                                                                                                                                                                                                                                                                                                                   IREDIEWTHIDYFUNATIONIENNTNGILAMLDEECLRPGTVTDETFLEKLNQVCATHQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KAQTKVRKK-----VMGVLDIYGFEIFEDNSFEQFIINYCNEKLQQIFIELTLKEEQEEY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TSIDQVVLERAFSFRTVEAKQEKVSTTLNVAQAYYARDALAKNLYSRLFSWLVNRINESI 372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LGVEGTTLREALTHRKIIAKGEELLSPLNLEQAAYARDALAKAVYSRTFTWLVRKINRSL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RVVKQPRGERNFHVFYQLLSGASEELLHKLKLERDFSRYNYL-SLDSAKVNGVDDAANFR 252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RGGAVRDRLLQSNPVLEAFGNAKTLRNDNSSRFGKYMDVQFDFKGAPVGGHILSYLLEKS 206
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              463;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative 183;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       38.5%; Score 2080; DB 2;
40.6%; Pred. No. 5.9e-125;
ative 183; Mismatches 346;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 1136;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels 148;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              motor domain homology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             mammalian myosin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                  678
                                                                                                                                                                                                618
                                                                                                                                                                                                                                                                                                                                                                                                       487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           382
                                                                                                                                 607
                                                                                                                                                                                                                                                                  547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              19;
```

VRHLGYKPEEYKMGRTKIFIRFPKTLFATEDSLEVPRQSLATKIQAAWRGFHWRQKELRV	RESULT 13 S32404 myosin heavy chain I, brain - mouse C;Species: Mus musculus (house mouse) C;Species: Mus musculus (house mouse) C;Species: 32404 #sequence_revision 20-Feb-1995 #text. C;Accession: \$32404; \$33973 A;Fitle: Molecular cloning of a mouse myosin I expressed A;Reference number: \$32404; MUJD:93209370; PMID:8458427 A;Accession: \$32404 A;Molecule type: mRNA A;Residues: 1-1094 <kos> A;Cross-references: EMBL:X69987; NID:9312270; PIDN:CAA49; R;Mercer, J.A. submitted to the EMBL Data Library, January 1993 A;Reference number: \$33973 A;Molecule type: mRNA A;Residues: 1-572, 'G', 574-762, 'G', 764-1094 <mer> A;Cross-references: EMBL:X69987 C;Superfamily: brush border myosin heavy chain I; myosin C;Keywords: nucleotide binding; P-loop F;55-675yDomain: myosin motor domain homology <mmot> F;55-102/Region: nucleotide-binding motif A (P-loop) Ouery Match Best Local Similarity 41.9%; Pred. No. 1.1e-124; Matches 464; Conservative 184; Mismatches 348; II</mmot></mer></kos>
SLEVRRQSLATKI	I, brain - mouse ulus (house mouse) #sequence_revision 20 \$33973 Qian, C.; Jiang, X.; M Qian, C.; Jiang, X.; M Cloning of a mouse myo Cloning of a M CS32404; MUJD:93209370 NA CKOS> EMBL:X69987; NID:g312 BL Data Library, Janua S33973
	- mouse use mouse) ce_revision 20-Feb-1995 #text_change ; Jiang, X.; Mercer, J.A. 3 of a mouse myosin I expressed in bra MUID:93209370; PMID:8458427 9987; NID:g312270; PIDN:CAA49604.1;

```
RESULT 14
A33620
myosin heavy chain I, brush border - chicken
N;Contains: myosin ATPase (EC 3.6.4.1)
C;Species: Gallus gallus (chicken)
C;Date: 31-Dec-1993 #sequence_revision 31-Dec
                                                                                                                                    Š
                                                                                                                                                                   В
                                                                                                                  ď
                                                                                                                                                                                           õ
                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                            ő
                                                                                                                                                                                                                                                                             Вþ
                                                                                                                                                                                                                                                                                                δõ
                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                                                                                                                                                                                                     da
                                                                                                                                                                                                                                                                                                                                                                                                                                                              δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            д
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Дb
                                                                                                                                          1017
                                                                                                                  1067
                                                                                                                                                                                                                          950
                                                                                                                                                                                                                                                                              893
                                                                                                                                                                                                                                                                                                                                                             793
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121
                                                                                                           KFIQGNQ-----KNGSVP-TCKRKNNR 1087
                                                                                                                           DFTSGSELLITKAKNGHLAVVAPRLNSR 1044
                                                                                                                                                                                  QR-EDNKQKGDVVLQSDHVIETLTK---TALSADRVN-NININQGSITFAGGPGRDGI-I 1016
                                                                                                                                                          KEGSEAASKGDFLFSSDHLIEMATKLYRTTLSQTKQKLNIEI---SDEFLVQFRQDKVCV
                                                                                                                                                                                                               VVNKINRANGKSTSRIFLLTNNNLLLADQKSGQIKSEVPLVDVTKVSMSSQNDGFFAVHL
                                                                                                                                                                                                                                         PVVKYDRKGYKPRPRQLLLTPSAVVIVE--DAKVKQRIDYANLTGISVSSLSDSLFVLHV
                                                                                                                                                                                                                                                                                                                        KLIYEEKLEASELFKOKKALYPSSVGQPFQGAYL---EINKNPKYKKLKDAIEEKIIIAE
                                                                                                                                                                                                                                                                                        KQQLQQKAVASEIFKGKKDNYPQSVPRLFISTRLGTEEISP----RVLQSLGSEPIQYAV
                                                                                                                                                                                                                                                                                                                                                                                                                                                 KRSAICIOSWWRGTLGRRKAAKRKWAAQTIRRLIRGF-----ILRHSPRCPENA----
                                                                                                                                                                                                                                                                                                                                                  VRASFLLNLRRQLPR-NVLDTSWPTPPPALREASELLRELCMKNMVW---KYCRSISPEW
                                                                                                                                                                                                                                                                                                                                                                            AYWHGTQARRELKRLKEEARRNDAVAVIWAYWLGLKVRREYRKFFRANAGKKIYEFTLQR
                                                                                                                                                                                                                                                                                                                                                                                                                                 KRSOVVIAAWYRRYEQQKRYQQIKSSALVIQSYIRGWKARKILRELKHOKRCKEAATTIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FNELEIPVEEHSFGRSKIFIRNPRTLFQLEDLRKORLEDLATLIQKIYRGWKCRTHFLLM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NESLVCHQIRYLGLLENVRVRRAGYAFRQAYEPCLERYKMLCKQTWPHWKGPARSGVEVL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DEVLIRHOVKYLGIMENLRVRRAGEAYRRKYEAFLQRYKSICPETWPMWAGRPQDGVAVL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SLIKSLEPEGNPAKVNLKRPPTRSSQFKASVATLMRNLQTKNPNYIRCIKPNDKKAAHIF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PIMAQCFDKSELS--DKKRPETVATQFKMSLLQLVETLRSKEPAYIRCIKPNDAKQPGRF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VRHLGYKPEEYKMGRTKIFIRFPKTLFATEDSLEVRRQSLATKIQAAWRGFHWRQKFLRV 738
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 IREDIEWTHIDYFNNAIICDLIENNTNGILAMLDEECLRPGTVTDETFLEKLNQVCATHQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EAEGIAWEPVQYFNNKIICDLVEEKFKGIISILDEECLRPGEATDLTFLEKLEDTVKPHP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KAQTKVRKK-----VMGVLDIYGFEIFEDNSFEQFIINYCNEKLQQIFIELTLKEEQEEY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TSIDQVVLERAFSFRTVEAKQEKVSTTLNVAQAYYARDALAKNLYSRLFSWLVNRINESI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LGVEGTTLREALTHRKIIAKGEELLSPLNLEQAAYARDALAKAVYSRTETWLVRKINRSL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TVRNAMQYVGFLDHEAEAVLEVVAAVLKLGNIEFKPESRVNGLDESKIKDKNELKEICEL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RVVKQPRGERNEHVEYQLLSGASEELLYKLKLERDESRYNYL-SLDSAKVNGVDDAANER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RVVHQNHGERNFHVFYQLLEGGEEETLRRLGLERNPQSYLYLVKGQCAKVSSINDKSDWK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EVNQVKEQLLQSNPVLEAFGNAKTVRNDNSSRFGKYMDIEFDFKGDPLGGVISNYLLEKS
  31-Dec-1993
                                        (fragment)
#text_change
                                                                                                                                                                                                                                                                                                                                                                                                         -----FFLDH
19-Apr-2002
                                                                                                                                                                                                                 1009
                                                                                                                                                                                                                                                                      949
                                                                                                                                                                                                                                                                                                904
                                                                                                                                                                                                                                                                                                                                                    848
                                                                                                                                                                                                                                                                                                                                                                              834
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 678
                                                                                                                                                                                                                                                                                                                                                                                                                                  774
                                                                                                                                                                                                                                                                                                                                                                                                                                                          787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     714
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       654
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     618
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         560
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             594
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                534
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  474
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   239
```

```
C;Accession: A33620
R;Garcia, A.; Coudrier, E.; Carboni, J.; Anderson, J.; Vandekerkhove, J.; Moosel J. Ceil Biol. 109, 2895-2903, 1989
A;Title: Partial deduced sequence of the 110-kD-calmodulin complex of the avian A;Reference number: A33620; MUID:90078325; PMID:2687288
A;Accession: A33620; MUID:90078325; PMID:2687288
A;Accession: A33620; MUID:90078325; PMID:2687288
A;Residues: 1-1000 <GAR>
A;Residues: 1-1000 <GGR>
A;Cross·references: GB:X58479; NID:963075; PIDN:CAA41388.1; PID:963076
C;Keywords: actin binding; hydrolase; Intestine; nucleotide binding; P-loop F;1-639/Domain: myosin motor domain homology <a href="https://www.chain.com/chain-in-myosin">crosin motor domain homology <a href="https://www.chain.com/chain-in-myosin motor domain homology chain.com/chain-in-myosin motor domain homology <a href="https://www.chain.com/chain-in-myosin hotor domain homology <a href="https://www.chain.com/chain-in-myo
                                                                                                                                                              Qy
                     В
                                                               Ş
                                                                                                                   DЬ
                                                                                                                                                                                                                  DЬ
                                                                                                                                                                                                                                                            Qy
                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                Qy
                                                                                                                                                                                                                                                                                                                                                                                                                     Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DЪ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ър
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ДЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ър
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local S
Matches 415
               716
                                                                 776
                                                                                                                                                                                                                                                                                                                    536
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         416
                                                                                                                                                                                                                                                                                                                                                                      596
                                                                                                                                                                                                                                                                                                                                                                                                                        476
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local Similarity hes 415; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           N
KTRRMYRRYFRSDACTRLSNFIYRRMVQKYLMGLQKNLPPMAVLDRTWPPAPYKFLSDAN
                                            ILR-----HSPRCPE-NAFFLDHVRASFLLNLRRQL-PRNVLDTSWPTPP-PALREAS
                                                                                                                                                QSLATKIQAAWRGFHWRQKFLRYKRSAICIQSWWRGTLGRRKAAKRKWAAQTIRRLIRGF
                                                                                                                                                                                                YKMLSRKTWPRWTGGDREGAEVLLAELKFPPEELAYGHTKIFIRSPRTLFDLEKRRQQRV
                                                                                                                                                                                                                                               YKSLCPETWPMWAGRPQDGVAVLVRHLGYKPEEYKMGRTKIFIRFPKTLFATEDSLEVRR
                                                                                                                                                                                                                                                                                                 LYSKNPNYIRCIKPNDTKTAMLETPDLYLAQVRYLGLMENVRVRRAGYAFRQLYQPFLER
                                                                                                                                                                                                                                                                                                                              LRSKEPAYIRCIKPNDAKQPGRFDEVLIRHQVKYLGLMENLRVRRAGFAYRRKYEAFLQR 655
                                                                                                                                                                                                                                                                                                                                                                                                        GFIEKNNDLLFRDLSQAMWAARHTLLRSLFPEGDPQRPSLKLPPTTGSQFKASVATLMKN
                                                                                                                                                                                                                                                                                                                                                                                                                                                     GFLDKNNDLLFRNLKETMCSSMNPIMAQCFDKS--ELSDKKRPETVATQFKMSLLQLVEI 595
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LRPGEATDLTFLEKLEDTVKPHPHFLTHKLADQK---TRKSLDRGEFRLLHYAGEVTYSVT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LRPGTVNEDTFITKLNQIFASHKRYESKETLNAKHVTDVSLPLRCFRIHHYAGKVTYNVT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NYCNEKLQQIFILMTLKEEQEEYVREAIQWTPVEFFDNSIICDLIENSKVGILAMLDEEC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NYCNEKLQQLFIELTLKSEQEEYEAEGIAWEPVQYFNNKIICDLVEEKFKGIISILDEEC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DALAKNIYSRLEDWLVNRINTSIQVKPG-----KQRKVMGVLDIYGFEIFQDNGFEQFII
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GAGKTEATKRLLQFYAETCPAPERGGAVRDRLLQSNPVLEAFGNAKTLRNDNSSRFGKYM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VLVSVNPYRDLQIYSRQHMERYRGVSFYEVPPHLFAVADTVYRALRTERRDQAVMISGES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DALAKAVYSRTFTWLVRKINRSLASKDAESPSWRSTTVLGLLDIYGFEVFQHNSFBQFCI 419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FQASGMEASSTAEPRELQETSQLIGLDPSTLEQALCSRTVKVRDESVLTALSVSQGYYGR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SYLYLVKGQCAKVSSINDKSDWKVMRKALSVIDFTEDEVEDLLSIVASVLHLGNI----H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GAGKTEASKLVMSYVAAVSSKGEEVDKVKEQLLQSNPVLEAFGNAKTIRNDNSSRFGKYM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FAADEDSNAQVTTENQLKYLTRLLGVEGTTLREALTHRKIIAKGEELLSPLNLEQAAYAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            HYGYL-NHEKSVLPGMDDAANFRAMQDAMAIIGFAPAEVTALLEVTAVVLKLGNVKLSSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DVEFDFKGDPLGGVISNYLLEKSRIVRHVKGERNFHIFYQLLAGGSAQLLQQLKLRPDCS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VVISVNPYKPLPIYTPEKVEEYHNCNFFAVKPHIYAIADDAYRSLRDRDRDQCILITGES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          35.3%;
41.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     191;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 1904; DB 1;
Pred. No. 9.2e-114;
1; Mismatches 358;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 1000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               domain homology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                34;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                  825
                                                                                                    715
                                                                                                                                                                                                  655
                                                                                                                                                                                                                                                                                                      595
                                                                                                                                                                                                                                                                                                                                                                                                        535
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           415
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     avian
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mooseker,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   intes
```

Qy 441 EYEAEGIAWEPVQYFNNI : :: 12 EYQREGIPWKHIDYFNN	Qy 381 SLASKDAESPSWRSTTVI : :: Db 362 IIEVKNYDTTVHGKNTVI	Qy 322 LLGVEGTTLREALTHRK: : : : : : :	Qy 266 KVMRKALSVIDETEDEVI : : : Db 248 KVVADAMKVIGEKPEEI(Qy 206 SRVVHQNHGERNEHVEYQ 	Qy 148 GGAVRDRLLQSNPVLI :: : Db 129 AEIERVKNMLLKSNCVLI	Qy 88 VSFYEVPPHLFAVADTV) Db 69 RELYERPPHLFAILDAA)	Qy 28 GVQDFVLLENFTSEAAFT	Query Match Best Local Similarity 4: Matches 426; Conservativ	A;Accession: A53933 A;Status: preliminary A;Status: preliminary A;Molecule type: mRNA A;Residues: 1-1006 <bae> A;Cross references: GB:X71997; NID:g516395; PID:g516396 C;Superfamily: brush border myosin heavy chain I; myosi C;Keywords: nucleotide binding; P-loop F;12-682/Domain: myosin motor domain homology <mmot> F;102-109/Region: nucleotide-binding motif A (P-loop)</mmot></bae>	R:Baehler, M.: Kroschewski, J. Cell Biol. 126, 375-389, A:Title: Rat myr 4 defines a A:Reference number: A53933;	RESULT 15 A53933 myosin I myr 4 - rat C;Species: Rattus norvegicus C;Date: 07-Oct-1994 #sequen C:Accescior. A5393	Qy 998 NI-NQGSITFAGGPGRDGIIDFT : ::: Db 956 SIADQFSTRFPKGDVAVTVVESA	Qy 943 ANLTGISVSSLSDSLFVI :: Db 896 CDIQGASVSRFSDGLLAI	Qy 885 EEISPRVLQSLGSEPIQY : : : : :	CO CEDAGLE LAWACAALAEC
ABGIAWEPVOYFNNKIICDLVEEKFKGIISILDEBCLRPGEATDLTFLEKLEDTVKP - -	LASKDAESPSWRSTTVLGLLDIYGFEVFQHNSFEQFCINYCNEKLQOLFIELTLKSBQE:	LLGVEGTTLREALTHRKIIAKGEELLSPLNLEQ-AAYARDALAKAVYSRTETWLVRKINR : : : : : :	KVMRKALSVIDFTEDEVEDLLSIVASVLHLGNIHFAADEDSNAQVTTENQLKYLTR : - - - - : - - - - - - - - - - - - -	RVVHQNHGERNFHVFYQLLEGGEEETLRRLGLERNPQSYLYLVKGQCAKVSSINDKSDW : : : ::: ::: RVIVQQPGERSFHSFYQLLQGGSEQMLHSLHLQKSLSSYNYIRVGAQLK-SSINDAAEF	GGAVRDRLLQSNPVLEAFGNAKTLRNDNSSRFGKYMDVQFDFKGAPVGGHILSYLLEK :: :	VSFYEVPPHLFAVADTVYRALRTERRDQAVMISGESGAGKTEATKRLLQFYAETCPAPER : : : : : : : : : : : : : : :	GVQDFVLLENFTSEAAFIENLRRRFRENLIYTYIGPVLVSVNPYRDLQIYSRQHMERYRG : :	y Match 34.5%; Score 1861; DB 2; Length 1006; Local Similarity 41.7%; Pred. No. 5.3e-111; hes 426; Conservative 158; Mismatches 301; Indels 136;	7; NID:g516395; PID:g516396 myosin heavy chain I; myosin motor domain ing; P-loop or domain homology <mmot> s-binding motif A (P-loop)</mmot>	nn, T. : identificati	t_change 02-Fe	I-NOGSITFAGGPGRDGIIDFT-SGSELLITKAKNGH 1033 : ::: :: : ADQFSTRFPKGDVAVTVVESAKGGGDVPVCKKRGSH 993	ANLTGISVSSLSDSLFVLHVQREDNK-QKGDVVLQSDHVIETLTKTALSAD-RVNNI ::	EEISPRVLQSLGSEPIQYAVPVVKYDRKGYKPRPRQLLLTPSAVVIVEDAKVKQRIDY :	<u> ŰELKSTEY RWACKAY REQLIFPQQRAMLQAKLWPRQLEKUKKALY AQSLQQPERGEY LGLIF</u>
P 500 K 481	E 440 - E 421	R 380 D 361	R 321 E 302	W 265 : E 247	X 205	R 147 R 128	G 87 6 68	Gaps 26;	homology	on, distribution,	b-2001		I 997 : L 955	Y 942 L 895	1 835

	L 945	945	Db
	I 997	997	Qy
9,0	KQRIDYANLTGISVSSLSDSLFVLHVQREDNKQKGDVVLQSDHVIETLTKTALSADRVNN	937 896	Db Db
8 9	KYTRKGYKPRPROLLLTPSAVVIVEDAKV	908 848	ДЬ
84	QQLQOKAVASEIFKGKKDNYPQSVPRLFISTRLGTEEISPRVLQSLGSEPIQYAVPVV 9(850 798	Оу
7.9	SFILNIRRQLPRNVLDTSWPTPPPALREASEILREICMKNMYWKYCRSISPEWK 84	796 738	Оу
7:	LRVKRSAICIQSWWRGTLGRRKAAKRKWAAQTIRRLIRGEILRHSPRCPENAFFLDHVRA 79	736 700	Qy , Db
69	LVRHLGYKPEEYKMGRTKIFIRFPKTLFATEDSLEVRROSLATKIQAAWRGFHWROKF 7: 	678 660	Фр
6 6	FDEVLIRHQVKYLGLMENLRVRRAGFAYRRKYEAFLQRYKSLCPETWPMWAGRPQDGVAV : : : : : : :	618	Фр
60	PIMAQCEDKSELSDKKRPETVATQEKMSLLQLVEILRSKEPAYIRCIKPNDAKQPGR 	561 541	Qy Db
5 5	HPHFLTHKLADQKTRKSLDRGEFRLLHYAGEVTYSVTGFLDKNNDLLFRNLKETMCSSMN 56	501 482	Qу

Search completed: December 9, 2002, 16:47:47 Job time : 49 secs

· :				
		•		
				•
			-	
	·.			
				٠
			•	
				,
*				

```
Title:
Perfect score:
Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Run
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Maximum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Minimum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Total number
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OM protein - protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9
   Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB seq
 Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-09-893-371-1
5398
1 MRYRASALGSDGVR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      length: 0
length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query
Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BLOSUM62
Gapop 10.0 , Gapext 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               112892 seqs, 41476328 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               December 9, 2002, 16:37:56; Search time 25 Seconds
 348.6
388.7
388.5
38.2
398.2
398.2
398.2
398.2
398.2
398.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
3
399.2
3
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399.2
399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SwissProt_40:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MRYRASALGSDGVRVTMESA.....LITKAKNGHLAVVAPRLNSR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Copyright
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length
   1028
1028
1026
1043
1107
1136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GenCore version 5.1.3 (c) 1993 - 2002 Compus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB
                                                                                                                                MY10_HUMAN
MYS2_DICDI
MY52_HUMAN
MY15_HOUSE
MY15_HUMAN
MYSN_ACACA
MY5A_MOUSE
MY5A_RAT
                                                                                                                                                                                                                                                                                                                                             MYHL_MOUSE
MYHL_RAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                  MY1C_MOUSE
MY1C_HUMAN
MY1B_DROME
                                                                                                                                                                                                                                                                                                                                                                           MYHL_HUMAN
                                                                                                                                                                                                                                                                                                                                  MY1A_DROME
                                                                                                                                                                                                                                                                                                                                                                                                                      MY1A_MOUSE
   MYSJ_DICDI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (without alignments)
1732.051 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Compugen Ltd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   112892
023979
946735
005096
0090bC
008329
0623978
023978
023978
023978
023979
023479
073479
0703479
0703479
0703479
0703479
0703479
0703479
0703479
0703479
0703479
0703479
0703479
0703479
0703479
0703479
0703479
0703479
0703479
0703479
0703479
0703479
0703479
0703479
0703479
0703479
0703479
0703479
0703479
0703479
0703479
0703479
0703479
0703479
0703479
0703479
0703479
0703479
0703479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Description
                                                                     2 dictyosteli
6 saccharomyc
2 homo sapien
4 bos taurus
9 mus musculu
7 homo sapien
9 dictyosteli
4 homo sapien
4 mus musculu
                                                                                                                                                                                                                                                                                                             5 homo sapien
7 gallus gall
9 mus musculu
4 rattus norv
8 dictsophila
9 dictsosteli
7 homo sapien
9 acanthamoeb
4 mus musculu
3 rattus norv
7 dictyosteli
                                                                                                                                                                                                         acanthamoeb
acanthamoeb
saccharomyc
                                                                                                                                                                                                                                                                                  mus musculu
dictyosteli
                                                                                                                                                                                                                                                      dictyosteli
                                                                                                                                                                                                                                                                                                                                                                                                                      mus musculu
                                                                                                                                                                                                                                                                                                                                                                                                                                    bos taurus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 mus musculu
                                                                                                                                                                                                                                                                       dictyosteli
                                                                                                                                                                                                                                                                                                                                                                                                        rattus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                homo sapien
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1044
                                                                                                                                                                                                                                                                                                                                                                                                        norv
```

"Cloning of the genes on	Weil D. Duiol R. Detit C.: Depetris D., Mattei M	Crozet F., Amraoui A.E., Blanchard S., Lenoir M., Ripoll C.	MEDLINE=97237053; PubMed	RP SEQUENCE OF 1-807 FROM N.A. (ISOFORM B).	[3]	Nature 409:685-690(2001).	RA Hayashizaki Y.;	RA Wynshaw-Boris A., Yoshida K., Hasegawa Y., Kawaji H., Kohtsu	RA Suzuki H., Toyo-oka K., Wang K.H., Weitz C., Whittaker C., V	RA Sasaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Stor	RA Lyons P., Marchionni L., Mashima J., Mazzarelli J., Mombaert	RA Gustincich S., Hill D., Hofmann M., Hume D.A., Kamiya M., Le	RA Brownstein M.J., Bult C., Fletcher C., Fujita M., Gariboldi	RA Sakai K., Okido T., Furuno M., Aono H., Baldarelli R., Barsh	RA KUENI P., LEWIS S., MATSUO Y., NIKAIDO I., PESOLE G., QUACKE RA SChriml L.M., Staubli F., Suzuki R., Tomita M., Waqner L., V	RA Fleischmann W., Gaasterland T., Gissi C., King B., Kochiwa F	RA Saito T., Okazaki Y., Gojobori T., Bono H., Kasukawa T., Sai	RA Arakawa T., Hara A., Fukunishi Y., Konno H., Adachi J., Fuku RA Aizawa K., Izawa M., Nishi K., Kivosawa H., Kondo S., Yamana	RA Kawai J., Shinagawa A., Shibata K., Yoshino M., Itoh M., Ish	RC STRAIN=C57BL/6J; TISSUE=Lung;	RP SEQUENCE FROM N.A. (ISOFORM A).	RL Neuron 18:711-722(1997).	RT of PITP alpha: positional complementation cloning and extract RT suppression.";	RT "The vibrator mutation causes neurodegeneration via reduced	RA Nemhauser J.L., Hawkins T.L., Rubin E.M., Lander E.S.;	RA Hamilton B.A., Smith D.J., Mueller K.L., Kerrebrock A.W.,	RX MEDLINE=97325785; PubMed=9182797;	RP SEQUENCE FROM N.A. (ISOFORMS A AND B).	RN [1]	Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae	raniata: Vertebrata: Euteleos	MYO1C.	16-OCT-2001 (Rel. 40, Last	16-OCT-2001 (Rel. 40, Created) 16-OCT-2001 (Rel. 40, Last sequence	Q9WTI7; 008834; 008571; Q9QW54;	SULT 1 1C_MOUSE STANDARD:	ALIGNMENTS	1190 22.0 1972 1 MYHB_RABIT 1187.5 22.0 1976 1 MYHA_BOVIN	1192 22.1 2017 1 MYSN_DROME 1191 22.1 1939 1 MYH6_HUMAN	1192 22:1 1972 1 MINI-MAN	1202 22.3 1935 1 MYH7_PIG	1206 22.3 1829 1 MY5A_CHICK 1206 22.3 1978 1 MYHB CHICK		1217.5 22.6 1938 1 MYS AFOTR
	1 MG.	C.				Š		ohtsuki S.,	C., Wilming L.,	Storch KF.,	paerts P.,	., Lee N.H.,	oldi M.,	Barsh G.,	lackenbush J., L., Washio T.,	iwa H.,	Saito R.,	Fukuda S., amanaka I.,	, Ishii Y.,				ktragenic	rced expression	eve M.P.,	;				rinae; Mus.	eleostomi:							35748 oryctolagus 27991 bos taurus	13533 homo sapien	35749 homo sapien	79293 sus scrofa)2440 gallus gall 0587 gallus gall	3y4il homo sapien 70569 rattus norv	aegu i pecte

RŢ

"Cloning of the genes encoding two murine and human cochlear

```
EMBL.

A EMBL; NAV.

JR EMBL; U96726; ...

DR EMBL; X99638; CAA6/-.

DR HSSP; P08799; IMND.

DR MGD; MGI:106612; Myolc.

DR Interpro; IPR000048; IQ_region.

DR Interpro; IPR001609; myosin_head.

DR Pfam; PF0063; myosin_head; 1.

DR Pfam; PF00612; IQ; 3.

DR Pfam; PF00612; IQ; 3.

DR Pfam; PF000193; MYOSINHEAVY.

DR PFNUTS; PR00193; MYOSINHEAVY.

DR SMART; SM00015; IQ; 2.

SMART; SM00016; IQ; 2.

""TE; PS50096; IQ; 2.

""TE; PS50096; IQ; 2.
                                                        Query Match
Best Local Similarity
Matches 1028; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CONFLICT
                                                                                                                                                                                                                                                                               DOMAIN
DOMAIN
DOMAIN
NP_BIND
VARSPLIC
                                                                                                                                                                                                                                                                                                                     PROSITE: PS50096; IQ; 2.

PROSITE: PS50096; IQ; 2.

Myosin; ATP-binding; Actin-binding; Calmodulin-binding;

Myosin; ATP-binding; Actin-binding;

Myosin; ATP-binding; Actin-binding;

Myosin; ATP-binding; Calmodulin-binding;

Myosin; ATP-binding; Actin-binding;

Myosin; ATP-binding; Calmodulin-binding;

Myosin; ATP-binding; Calmodulin-binding;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its modified and this statement is not removed. Usage by and for commercial entitles requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE OF 146-5
MEDLINE-93194946;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         unconventional type I myosins.";
Genomics 40:332-341(1997).
[4]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OF 146-593 FROM
       Conservative
                                                      <u>۸</u>
                                                                                                                                                                                                                                                                           Alternative
683 M
722 I
751 I
112 A
1028 G
                                                                           35
64
216
237
252
353
368
411
481
481
700
786
                98.6%;
100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              93 FROM N.A.
PubMed=8449986;
                                                     118155
                  .0%;
                                        IMPT (IN ISOFORM B)

RR -> GG (IN REF 3).

SRO -> RRK (IN REF 3).

T -> A (IN REF 4).

C -> F (IN REF 4).

VM -> LL (IN REF 4).

VM -> LL (IN REF 4).

VM -> LI (IN REF 4).

VM -> LI (IN REF 4).

R -> A (IN REF 4).

VM -> IKH (IN REF 4).

VKP -> IKH (IN REF 4).

VKP -> IKH (IN REF 4).

VKP -> G (IN REF 4).

S -> G (IN REF 3).

R -> G (IN REF 3).

R -> D (IN REF 3).

R -> D (IN REF 3).
   Score 5320; [
; Pred. No. 0;
0; Mismatches
       0
                                                                                                                                                                                                                                        IQ 1.
IQ 1.
ATP (POTENTIAL).
ATP (POTENTIAL).
GYKPRPROLLLTPSAVVIVEDAKVKORIDYANLTGISVSSL
GYKPRPROLLLTPSAVVIVEDAKVKORIDYANLTGISVSSL
GSLFVLHVQREDNKOKGDVULQSDHVIETLTKTALSADRV
NNININGGSITFAGGPGRDGIIDFTSGSELLTIKAKNGHLA
VVAPRLNSR -> VTSLAPGSCCSRPVLWSLWRMLKSSFRLA
              $ 5320; [
                           DΒ
                                                                                                                                                                                                                                     VTSLAPGSCCSRPVLWSLWRMLKSSREL
                         1;
   ,0
                        Length
   Indels
                         1028;
  0,
 Gaps
0,
```

```
В
            QY
                            DЬ
                                        δÃ
                                                          рЬ
                                                                       δõ
                                                                                       Вb
                                                                                                     20
                                                                                                                     DЪ
                                                                                                                                 Qy
                                                                                                                                                 Дb
                                                                                                                                                              Qy
                                                                                                                                                                              DЪ
                                                                                                                                                                                            Qy
                                                                                                                                                                                                           В
                                                                                                                                                                                                                        ρy
                                                                                                                                                                                                                                         DЬ
                                                                                                                                                                                                                                                       Qy
                                                                                                                                                                                                                                                                      р
                                                                                                                                                                                                                                                                                  γ
                                                                                                                                                                                                                                                                                                   망
                                                                                                                                                                                                                                                                                                              Qy
                                                                                                                                                                                                                                                                                                                                ₽
                                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                         Qy
                                                                                                                                                                                                                                                                                                                                                                                          DЪ
                                                                                                                                                                                                                                                                                                                                                                                                        Qy
                                                                                                                                                                                                                                                                                                                                                                                                                       DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                   γQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δõ
                            961
                                                          901
                                                                        917
                                                                                       841
                                                                                                                    781
                                                                                                                                 797
                                                                                                                                                 721
                                                                                                                                                                737
                                                                                                                                                                              661
                                                                                                                                                                                                           601
                                                                                                                                                                                                                          617
                                                                                                                                                                                                                                        541
                                                                                                                                                                                                                                                       557
                                                                                                                                                                                                                                                                      481
                                                                                                                                                                                                                                                                                    497
                                                                                                                                                                                                                                                                                                  421
                                                                                                                                                                                                                                                                                                                 437
                                                                                                                                                                                                                                                                                                                                361
                                                                                                                                                                                                                                                                                                                                              377
                                                                                                                                                                                                                                                                                                                                                                           317
                                                                                                                                                                                                                                                                                                                                                             301
                                                                                                                                                                                                                                                                                                                                                                                          241
                                                                                                                                                                                                                                                                                                                                                                                                                       181
                                                                                                                                                                                                                                                                                                                                                                                                        257
                                                                                                                                                                                                                                                                                                                                                                                                                                     197
                                                                                                                                                                                                                                                                                                                                                                                                                                                    121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   137
      VAPRLNSR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            17
                                                  SDHVIETLTKTALSADRVNNININGSITFAGGPGRDGIIDFTSGSELLITKAKNGHLAV
                             SDHVIETLTKTALSADRVNNININOGSITFAGGFGRDGIIDFTSGSELLITKAKNGHLAV
                                                                                                                                                  RVKRSAICIQSWWRGTLGRRKAAKRKWAAQTIRRLIRGFILRHSBRCPENAFFLDHVRAS
                                                                                                                                         RVKRSAICIOSWWRGTLGRRKAAKRKWAAQTIRRLIRGFILRHSPRCPENAFFLDHVRAS
                                                                                                                                                                       VLVRHLGYKPEEYKMGRTKIFIRFPKTLFATEDSLEVRRQSLATKIQAAWRGFHWRQKFL
                                                                                                                                                                              VLVRHLGYKPEEYKMGRTKIFIRFPKTLFATEDSLEVRROSLATKIOAAWRGFHWROKFL
                                                                                                                                                                                                           REDEVLIRHQVKYLGLMENLRVRRAGFAYRRKYEAFLQRYKSLCPETWPMWAGRPQDGVA
                                                                                                                                                                                                                                 RFDEVLIRHQVKYLGLMENLRVRRAGFAYRRKYEAFLQRYKSLCPETWPMWAGRPQDGVA
                                                                                                                                                                                                                                                                                            SEQEEYEAEGIAWEPYQYFNNKIICDLVEEKFKGIISILDEECLRPGEATDLTFLEKLED
                                                                                                                                                                                                                                                                                                                         SEQEEYEAEGIAWEPVQYFNNKIICDLVEEKFKGIISILDEECLRPGEATDLTFLEKLED
                                                                                                                                                                                                                                                                                                                                                      KYLTRLLGVEGTTLREALTHRKIIAKGEELLSPLNLEQAAYARDALAKAVYSRTETWLVR 376
                                                                                                                                                                                                                                                                                                                                                                                                                HILSYLLEKSRVVHQNHGERNFHVFYQLLEGGEEETLRRLGLERNPQSYLYLVKGQCAKV
                                                                                                                                                                                                                                                                                                                                                                                    SSINDKSDWKVMRKALSVIDFTEDEVEDLLSIVASVLHLGNIHFAADEDSNAQVTTENQL
                                                                                                                                                                                                                                                                                                                                                                                            SSINDKSDWKVMRKALSVIDFTEDEVEDLLSIVASVLHLGNIHFAADEDSNAQVTTENQL
                                                                                                                                                                                                                                                                                                                                                                                                                         HILSYLLEKSRVYHQNHGERNFHVFYQLLEGGEEETLRRLGLERNPQSYLYLVKGQCAKV
                                                                                                                                                                                                                                                                                                                                                                                                                                                     FYAETCPAPERGGAVRDRLLQSNPVLEAFGNAKTLRNDNSSRFGKYMDVQFDFKGAPVGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FYAETCPAPERGGAVRDRLLQSNPVLEAFGNAKTLRNDNSSRFGKYMDVQFDFKGAPVGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1044
                                     1036
                                                   960
                                                                  976
                                                                                              916
                                                                                                              840
                                                                                                                             856
                                                                                                                                          780
                                                                                                                                                         796
                                                                                                                                                                        720
                                                                                                                                                                                     736
                                                                                                                                                                                                    660
                                                                                                                                                                                                                   676
                                                                                                                                                                                                                                  600
                                                                                                                                                                                                                                                               540
                                                                                                                                                                                                                                                                             556
                                                                                                                                                                                                                                                                                                           496
                                                                                                                                                                                                                                                616
                                                                                                                                                                                                                                                                                            480
                                                                                                                                                                                                                                                                                                                          420
                                                                                                                                                                                                                                                                                                                                                                                    300
                                                                                                                                                                                                                                                                                                                                                                                                                               256
                                                                                                                                                                                                                                                                                                                                                                                                                                               180
                                                                                                                                                                                                                                                                                                                                                                                                                                                             196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         60
```

```
RESULT 2

MY1C_HUMAN

ID MY1C_HUMAN

AC 000159;
DT 16-0CT-2001

DT 16-0CT-2001

DT 16-0CT-2001

DE MYOSIN IC (!
GN MY01C.

OS HOMO Sapiens

OC EURARYOTA; !
OC Mammalia: El
OX NCBL_TaxID--

RN [1]

RP SEQUENCE FR(
RC TISSUE-Kidn,

RX MEDLINE-972.

RA Hamel C., F
RO UNCOUVENTO

CC COMPART

CC C. SIMILAR

CC --------

CC SIMILAR

CC ---------

CC This SWISS-

CC This SWISS-

CC This SWISS-

CC This SWISS-

CC TOSE by nc

CC TOSE SIMILAR

CC ------------

DR EMBL; X985(
DR CHLICE

DR GENEW; HGN(
DR FAINTS; PR(
DR FAINTS; PR(
DR SMART; SMO)

DR SMART; SMO)

DR SMART; SMO)

DR SMART; SMO)

DR SMARIN

FT DOMAIN

FT DOMAIN

FT NP_BIND

SO SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RA Hamel C., Fizames C., RA Hamel C., RA 
                                               Ş
                                                                                                В
                                                                                                                                          Qy
  В
                                                                                                                                                                                                                                                                                                                                                                                                InterPro; IPR000048; IQ_region.

InterPro; IPR001609; myosin_head.

Pfam; PF00603; myosin_head; 1.

Pfam; PF00603; myosin_head; 1.

PRINTS; PR00193; MYOSINHEAVY.

PRODOM; PD000355; myosin_head; 1.

PRODOM; PD000355; myosin_head; 1.

PRODOM; SM00015; IQ; 2.

R SMART; SM00015; IQ; 2.

R PROSITE; PS50096; IQ; 2.

W Myosin; ATP-binding; Actin-binding; Rep Multigene family.

M Multigene family.

1 683 MYOSIN HEAD-LIKE.
                                                                                                                                                                                                 Query Match
Best Local S
Matches 989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         16-OCT-2001 (Rel. 40, C
16-OCT-2001 (Rel. 40, I
16-OCT-2001 (Rel. 40, I
16-OCT-2001 (Rel. 40, I
Myosin IC (Myosin I bet
MYO1C.
Homo sapiens (Human).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Genew; HGNC:7596; MYO1B.
Genew; HGNC:7597; MYO1C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 This SWISS-PROT entry is copyright. It is produced through a collab between the Swiss Institute of Bioinformatics and the EMBL outst the European Bioinformatics Institute. There is no restrictions use by non-profit institutions as long as its content is in modified and this statement is not removed. Usage by and for commodified and this statement is not removed. Usage by and for commodified and this statement is not removed. Here is not commodified and this statement is not removed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TISSUE-Kidney;
MEDLINE-97237053; PubMed-9119401;
Crozet F., Amraoui A.E., Blanchard S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa;
Mammalia; Eutheria;
  61
                                               77
                                                                                                                                                                                                    Local Similes 989; C
                                                                                                                                                  17
                                                                                                   _
                                                                                              606538;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           x98507;
                       YSRQHMERYRGYSFYEVPPHLFAVADTVYRALRTERRDQAVMISGESGAGKTEATKRLLQ
YSRQHMERYRGVSFYEVPPHLFAVADTVYRALRTERRDQAVMISGESGAGKTEATKKLLQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               equires a license agreement (See http://www.isb-sib.ch/announce/email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                    1
699
723
105
1028
                                                                                                                                                                                                 larity 96. Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (Human).
|etazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
|theria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CAA67131.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1MND.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STANDARD;
                                                                                                                                                                                                                                                                                                       ΑΑ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             40, Last sequence up
40, Last annotation
I beta) (MMI-beta)
                                                                                                                                                                                                                                                                                                                              683
722
751
112
                                                                                                                                                                                                                        95.3%;
                                                                                                                                                                                                                                                                                                       118037
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Created)
                                                                                                                                                                                                                                                                                                  MYOSIN HEAD-LIKE.
IQ 1.
IQ 2.
IQ 2.
ATP (POTENTIAL).
7 MW; 0E9C3680527F8
                                                                                                                                                                                                 Score 5143; D
Pred. No. 5.6e
23; Mismatches
                                                                                                                                                                                                                                                                                                       0E9C3680527F85C6
                                                                                                                                                                                                                        5143;
No. 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                on update)
) (MMIb).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Lenoir M., Ripoll C.,
                                                                                                                                                                                                                      DB 1;
.6e-319;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ΑA
                                                                                                                                                                                                    319;
                                                                                                                                                                                                                                             Length
                                                                                                                                                                                                                                                                                                    CRC64;
                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Repeat
                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Vago
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            collaboration -
                                                                                                                                                                                                 Gaps
                                               136
                                                                                                60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           90
                                                                                                                                                                                                    0;
```

```
Qγ
                                                                                                                                                                       δÃ
                                                                                                                                                                                         οy
                                                                                                                                                                                                  В
                                                                                                                                                                                                           ΩV
                                                                                                                                                                                                                             QΥ
                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                               Qγ
                                                                                                                                                                                                                                                                Qy
                        Š
                                   В
                                           δÃ
                                                                       뫄
                                                                               δÃ
                                                                                         В
                                                                                                 Q
                                                                                                          Вþ
                                                                                                                   δÃ
                                                                                                                            Ъ
                                                                                                                                    γQ
                                                                                                                                              멍
                                                                                                                                                               B
                                                                                                                                                                                 Вb
                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                   QY
        Ş
                 Ъ
                                                    В
                                                            Qy
1021
                 961
                                   901
                                                     841
                                                              857
                                                                       781
                                                                                797
                                                                                                  737
                                                                                                           661
                                                                                                                   677
                                                                                                                            601
                                                                                                                                    617
                                                                                                                                              541
                                                                                                                                                       557
                                                                                                                                                                481
                                                                                                                                                                        497
                                                                                                                                                                                  421
                                                                                                                                                                                          437
                                                                                                                                                                                                   361
                                                                                                                                                                                                            377
                                                                                                                                                                                                                     301
                                                                                                                                                                                                                              317
                                                                                                                                                                                                                                       241
                                                                                                                                                                                                                                                257
                                                                                                                                                                                                                                                         181
                                                                                                                                                                                                                                                                  197
                                                                                                                                                                                                                                                                           121
                                                                                                                                                                                                                                                                                    137
                                                                                         721
    VAPRLNSR 1044
                                                                                                                                                                                 SSINDKSDWKVMRKALSVIDFTEDEVEDLLSIVASVLHLGNIHFAADEDSNAQVTTENQL
                                                                                                                                                                                                                                                        RVKRSAICIQSWWRGTLGRRKAAKRKWAAQTIRRLIRGFILRHSPRCPENAFFLDHVRAS
                                                                                                          FYAETCPAPERGGAVRDRLLQSNPVLEAFGNAKTLRNDNSSRFGKYMDVQFDFKGAPVGG
                 SDHVIETLTKTALSADRVNNININQGSITFAGGPGRDGIIDFTSGSELLITKAKNGHLAV
                                                                                                                                                                TVKHHPHFLTHKLADQRTRKSLGRGEFRLLHYAGEVTYSVTGFLDKNNDLLFRNLKETMC
                                                                                                                                                                   TVKPHPHFLTHKLADQKTRKSLDRGEFRLLHYAGEVTYSVTGFLDKNNDLLFRNLKETMC
VAPRLNYR
1028
                                                                                                                                                                                                            436
                                                                                                                                                                                                   420
                                   960
                                            976
                                                     900
                                                              916
                                                                      840
                                                                                856
                                                                                         780
                                                                                                  796
                                                                                                          720
                                                                                                                   736
                                                                                                                            660
                                                                                                                                     676
                                                                                                                                              600
                                                                                                                                                      616
                                                                                                                                                               540
                                                                                                                                                                        556
                                                                                                                                                                                 480
                                                                                                                                                                                          496
                                                                                                                                                                                                                     360
                                                                                                                                                                                                                                      300
                                                                                                                                                                                                                                                316
                                                                                                                                                                                                                                                         240
                                                                                                                                                                                                                                                                 256
                                                                                                                                                                                                                                                                           180
```

RESULT 3

WY1B_DROME STANDARD; PRT; 10

AC Q23979; 09W0H0;
DT 16-OCT-2001 (Rel. 40, Created)
DT 16-OCT-2001 (Rel. 40, Last sequence up
DT 15-UUN-2002 (Rel. 41, Last annotation
DE Myosin IB (MIB) (Brush border myosin I

```
RX MEDLINE-20196006; PubMed=10731132;

RA Adams M.D., Celniker S.E., Holt R.A., Evans C.A., Gocayne J.D.,

RA Adams M.D., Celniker S.E., Holt R.A., Evans C.A., Gocayne J.D.,

RA Adams M.D., Celniker S.E., Holt R.A., Evans C.A., Gocayne J.D.,

RA Amanatides P.G., Scherer S.E., H.W., Hoskins R.A., Gaile R.F.,

RA George R.A., Lewis S.E., Richards S., Ashburner M., Henderson S.N.,

RA Brandon R.C., Rogers Y.H.C., Blazej R.G., Champe M., Pfeiffer B.D.,

RA Brandon R.C., Wortman J.R., Yandell M.D., Zhang Q., Chen L.X.,

RA Brandon R.C., Wortman J.R., Yandell M.D., Zhang Q., Chen D.,

RA Bullew R.M., Basu A., Baxer E.G., Helt G., Nelson C.R., Miklos G.L.G.,

RA Burlis R.C., Basus P.V., Berman B.P., Bhandari D., Bolshakov S.,

RA Burlis R.C., Busam D.A., Buller H., Cadieu E., Center A., Champe M.,

RA Borkova D., Botchan M.R., Bouck J., Boxytser P., Bartella S., Duhke C., Danhake C., Danhake C., Danhake C., Danhake C., Danhake C., Berritara S., Fleischmann W.,

RA Dodson K., Doup L.E., Downes M., Dugan-Rocha S., Dukes P.,

RA Dodson K., Doup L.E., Downes M., Dugan-Rocha S., Dukes P.,

RA Dodson K., Doup L.E., Downes M., Dugan-Rocha S., Dukes P.,

RA Glodek A., Gong F., Gorrell J.H., Gu Z., Gelbart W.M., Glasser K.,

RA Harris N.L., Harvey D., Helman T.J., Hernandez J.R., Houck J.,

RA Hostin D., Houston K.A., Howland T.J., Hernandez J.R., Houck J.,

RA Hostin D., Houston K.A., Howland T.J., Hernandez J.R., Houck J.,

RA Lasko P., Lei Y., Levitsky A.A., Li J., Li Z., Liang Y., Lin X.,

RA Lasko P., Lei Y., Levitsky A.A., Li J., Li Z., Liang Y., Lin X.,

RA Mchulov G., Milshina N.V., Mobarry C., Morris J., Moshrefi A.,

RA Mchulov G., Milshina N.V., Mobarry C., Worls J., Moshrefi A.,

RA Mchulov G., Milshina N.V., Mobarry C., Worls J., Woshrefi A.,

RA Mchulov G., Milshina N.V., Mobarry C., Worls J., Woshrefi A.,

RA Mchulov G., Milshina N.V., Mobarry C., Wang N., Smith T.,

RA Mount S.M., Moy M., Murphy B., Murphy L., Murny D.M., Nelson D.L.,

RA Manshina R., Fetcher C., Stapleco M., Strong R., Sun E.,

RA Manshina R.,
MEDLINE-96069904; running M.B., Mooseker m.s., Morgan N.S., Heintzelman M.B., Mooseker m.s., "Characterization of myosin-IA and myosin-IB," "Characterization of myosin-IB brush "Characterization of myosin-IB brush" "Characterization of myosin-IA and myosin-IB," "Characterization of myosin-IB," "Characterization" "Characterizati
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Cheney C.M., Kravit N.G., Verbsky J.W.;
"A new myosin I gene in Drosophila";
Biochem. Biophys. Res. Commun. 195:1280-1288(1993)
                                                                                                                                                                                                                                                                                                                                                                         FUNCTION,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE OF 630-1026 FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE OF 338-697 FROM N.A. MEDLINE#94029958; PubMed#8216259;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE-16ad;
MEDLINE-94260541; PubMed-8201616;
Morgan N.S., Skovronsky D.M., Artavanis-Tsakonas S., Mooseker M.S.,
Morgan N.S., Skovronsky D.M., Artavanis-Tsakonas S., Mooseker M.S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    myosin-IA and myosin-IB.";
J. Mol. Biol. 239:347-356(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Drosophila melanogaster (Fruit fly).
Eukaryota; Metazoa; Arthropoda; Mandibulata; Pancrustacea; Hexapoda;
Insecta; Pterygota; Neoptera; Endopterygota; Diptera; Brachycera;
Muscomorpha; Ephydroidea; Drosophilidae; Drosophila.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.,
                                                                                                                                                                                                                                                                                                                                                      SUBCELLULAR LOCATION,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (JUL-1997)
                                                                                                                                                                                                                                                                                                                                                                                                                                             to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DEVELOPMENTAL
                                                                                                                                                                                                                                                                                                                                                TISSUE
                                           brush border
                                                                                                                                                                                                                                                                                                                                   SPECIFICITY,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STAGE
                                                                                             two unconventional
                                                                                                                                                                                                                                                                                                                                   AND
                                           cytoskeleton.";
                                                                                                                                                                                                                                                                                                                             DEVELOPMENTAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        melanogaster
```

Qy В

61

137 FYAETCPAPERGGAVRDRLLQSNPVLEAFGNAKTLRNDNSSRFGKYMDVQFDFKGAPVGG

196 120

YTDDHVKAYRNKHFYEMPPHIFAVTDNAFRSLIEENRGQCVLISGESGSGKTEASKKVLQ

```
Qy
                                                 ДЬ
                                                                          Qy
                                                                                                                                                               Matches
                                                                                                                     Query Match
Best Local
                                                                                                                                                                        CONFLICT
CONFLICT
CONFLICT
CONFLICT
CONFLICT
CONFLICT
                                                                                                                                                                                                                                                                          DOMAIN
NP_BIND
DOMAIN
                                                                                                                                                                                                                                                                                                                    DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                       InterPro; Ipr000048; IQ_region.
InterPro; IPR001609; myosin_head.
Pfam; PF00063; myosin_head; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its modified and this statement is not removed. Usage by and for commercial entitles requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                        SMART; SM00015; IQ; 1.
SMART; SM00242; MYSc; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                  Pfam; PF00612; IQ; PRINTS; PR00193; M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FlyBase; FBgn0010246; Myo61F
InterPro; IPR000048; IQ_region.
                                                                                                                                                                                                                                                                                                                                             Myosin; ATP-binding;
                                                                                                                                                                                                                                                                                                                                                              PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                  ProDom; PD000355; myosin_head;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        HSSP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      -!- DEVELOPMENTAL STAGE: EXPRESSION STARTS AT 8-12 HOURS EMBRYONI DEVELOPMENT, CONTINUES TO INCREASE UNTIL THIRD LARVAL INSTAR, DISAPPEARS IN PUPAE AND IS PRESENT AT A LOW LEVEL IN ADULTS. EXPRESSION IN EMBRYOGENESIS IS CORRELATED WITH THE FORMATION BRUSH BORDER WITHIN THE ALLMENTARY CANAL.
-!- SIMILARITY: CONTAINS 1 MYOSIN-LIKE GLOBULAR HEAD DOMAIN.
-!- SIMILARITY: CONTAINS 2 IQ DOMAINS.
-!- CAUTION: Ref.2 sequence differs from that shown due to errone
                      77
                                                                                                      Local Similarity
mes 532; Conserv
                                        METGLHERDRAGVQDFVLLENYQSEEAFIGNLKKRFQEDLIYTYIGQVLISVNPYKQLPI
                                                          MESALTARDRYGYODFYLLENFTSEAAFIENLRRRFRENLLYTYIGPYLYSVNPYRDLQI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    . BIOL. 172:51-71(1995).

FUNCTION: INVOLVED IN DIRECTING THE MOVEMENT OF ORGANIZLES ALONG ACTIN PILAMENTS (BY SIMILARITY).

SUBCELLULAR LOCATION: CYTOPLASMIC. PROTEIN SHIPTS FROM THE BASOLATERAL TO APICAL DOMAIN IN ENTEROCYTES AND FOLLICLE CELLS.

TISSUE SPECIFICITY: IN THE EMBRYO, EXPRESSED IN GASTRIC CAECAE, MIDGUT CELLS OF THE PROVENTRICULUS, AND IN THE MID AND HINDGUT. ]
YSRQHMERYRGVSFYEVPPHLFAVADTVYRALRTERRDQAVMISGESGAGKTEATKRLLQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          gene model prediction.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                OOGENESIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MICROVILLI. ALSO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         THE LARVAL AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              007596; AAA19591.1; .ALT_SEQ. AE003471; AAF47477.1; ALT_SEQ. L13070; .NOT_ANOTATED_CDS. AJ000879; CAA04367.1; .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        P08799;
                                                                                                                                                                                                                                                                                                                                                           PS50096; IQ;
                                                                                                                                                            697
105
583
64
221
242
262
265
545
585
1026
                                                                                                     Conservative
                                                                                                                                                            AA;
                                                                                                                                                                                                                                                                                                                                                                                                                  MYOSINHEAVY
                                                                                                                                                                           889
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADULT
                                                                                                                  48.6%;
51.5%;
                                                                                                                                                                                                                                                                                                           Calmodulin-binding; Actin-binding; Repeat.

MYOSIN HEAD-LIKE.

10 1.
                                                                                                                                                            117955
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EXPRESSED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     : IN THE EMBRYO, 1
E PROVENTRICULUS,
IT GUT BRUSH BORDE
                                                                                                   177;
                                                                                                                                                   ACTIN-BINDING (BY SIMILARITY)
D -> N (IN REF. 1).
R -> G (IN REF. 1).
R -> S (IN REF. 1).
T -> G (IN REF. 1).
S -> N (IN REF. 2).
EL -> D (IN REF. 3).
D -> AI (IN REF. 3).
55 MW; 60852B647FE98057 CRC64;
                                                                                                               Score 2626; DB 1;
Pred. No. 4.3e-159;
                                                                                                                                                                                                                                                                                   ATP (BY SIMILARITY)
                                                                                                                                                                                                                                                                                                    IQ 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BRUSH BORDER, EXI
ED AT HIGH LEVELS
                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EXPRESSED IN GASTRIC CAECAE, AND IN THE MID AND HINDGUT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          that shown due to erroneous
                                                                                                   301;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EXPRESSED IN THE
                                                                                                                                                                                                                                                                      SIMILARITY).
                                                                                                                           Length 1026;
                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              HOURS EMBRYONIC LARVAL INSTAR,
                                                                                                24;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CELLS DURING
                                                                                               Gaps
             136
                                         60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 H
                                                                                               8,
```

```
RESULT
MYHL_BO
ID MY
AC PI
DT 01
DT 16
DT 16
DE B1
GN MY
                                                                                                                                                                                δõ
                                                                                                                                                                                                             밁
                                                                                                                                                                                                                               δõ
                                                                                                                                                                                                                                                          멍
                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                    Qγ
                                                                                                                                                                                                                                                                                                                                                                    멍
                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                        рь
                                                                                                                                                                                                                                                                                                                                                                                                                                              Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                          밁
          MYHL_BOVIN STANDARD P10568; Q9TS38; Q1-JUL-1989 (Rel. 11, C Q1-JUL-1989 (Rel. 11, I 16-OCT-2001 (Rel. 40, I Brush border myosin I (Brush border 110-kDa F
                                                                                                        BOVIN
                                                                                                                                                            1011
                                                                                                                                                                                                                                                                897
                                                                                                                                                                                                                                                                                                                    837
                                                                                                                                                                                                                                                                                                                                           855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             657
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       675
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            617
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 497
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      377
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 197
                                                                                                                                                                                                             951
                                                                                                                                                                                                                                      965
                                                                                                                                                                                                                                                                                          912
                                                                                                                                                                                                                                                                                                                                                                       777
                                                                                                                                                                                                                                                                                                                                                                                                 795
                                                                                                                                                                                                                                                                                                                                                                                                                           717
                                                                                                                                                                                                                                                                                                                                                                                                                                                   735
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121
                                                                                                                                                         : | ||| ::
PGVVRDK-GHLVII 1023
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TRINDADSFKQVQQALTVIDFTKEEQREIFGIVASILHLGNVGF-TEVEGNAKVNSRDLV
                                                                                                                                                                                  LLITKAKNGHLAVV 1037
                                                                                                                                                                                                                                                                                                                                KAVASEIFKGKKDNYPQSVPRLFISTRLGTEEI---SPRVLQSLGSEPIQYAVPVVKYDR
                                                                                                                                                                                                                                                                                                                                                                                   ASFLLNLRRQLPRNVLDTSWPTPPPALREASELLRELCMKNMVWKYCRSISPEWKQQLQQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TVKPHPHFLTHKLADQKTRKSLDRGEFRLLHYAGEVTYSVTGFLDKNNDLLFRNLKETMC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQDEYRREGIEWIPVEYFONKVICNLIEEKHKGIISILDEECLRPGEPTDKTFLEKLTQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQEEYEAEGIAWEPVQYFNNKIICDLVEEKFKGIISILDEECLRPGEATDLTFLEKLED 496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KINRSLASKDAESPSWRSTTVLGLLDIYGFEVFQHNSFEQFCINYCNEKLQQLFIELTLK 436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KYLTRLLGVEGTTLREALTHRKIIAKGEELLSPLNLEQAAYARDALAKAVYSRTFTWLVR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NILNYLLEKSRVVAQMGGERNFHIFYQLLAGADEALLQELRLERALDTYSYLTDGLNGTV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            HILSYLLEKSRVVHQNHGERNFHVFYQLLEGGEEETLRRLGLERNPQSYLYLVKGQCAKV
                                                                                                                                                                                                                         FLRVKRSAICIQSWWRGTLGRRKAAKRKWAAQTIRRLIRGFILRHSPRCPENAFFLDHVR 794
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VAVLVRHLGYKPEEYKMGRTKIFIRFPKTLFATEDSLEVRRQSLATKIQAAWRGFHWRQK 734
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VFNDELVLHQVKYLGLMENLRVRRAGFAYRRTYELFLERYKSLSKSTWPNYKGPGGPKAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KAGNGIVRSCFPEKELRSLKRPETAITQFRASLNNLMDILMCKEPSYIRCIKPNDLQTAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RLNISLQAKETRA---SRNNVMGILDIYGFEIFQKNSFEQFCINFCNEKLQQLFIELTLK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VTAARLLGVNASELEAALTHRTIDARGDVVTSPLNQELAIYARDALAKAVYDRLFSWLVQ
                                                                                                                                                                                                            DLKKDKGDLILIIPRIIEFSTYIIDTVGTASIVSIVDRNSLEHNVVKGKGGVIDIQTGAE
                                                                                                                                                                                                                                                                HGYKSRDRFILLSNKAIYVLDGKTYKQKHRLPLDKIDF-----TLTNHNDDLMVIRIPL
                                                                                                                                                                                                                                                                                      KGYKPRPRQLLLTPSAVVIVEDAKVKQ-----RIDYANLTGISVSSLSDSLFVLHVQR 964
                                                                                                                                                                                                                                                                                                                   KVLAEKVFKGKKNNYASSVSTWFQEDRIPKEHIQRVNDFVASTFGSEQLKYQSFCTKFDR
                                                                                                                                                                                                                                                                                                                                                                     RMWLLRLAKELPTKVLDKSWPHAPGHCEEASGILHRLHRLHLARIYRLKLTPQQKRQFEL
                                                                                                                                                                                                                                                                                                                                                                                                                        YLKLRAQVIIMQSYCRRKLAQQAAKKRREAADKIRAFIKGFITRNDAPNGFNEEFIANAK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VQQLVKDLGWDEEKYRVGETKLF IRWPRTLFDTEDAYQEKKHEIAAI IQAHWKGLMQRRK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FIAACSGNQTTVEGVKDKLLKSNPVLEAFGNAKTNRNDNSSRFGKYMDIQFDFKGAPIGG
                                                                                         STANDARD;
                       Last annotation update) (BBM-I) (BBMI) (Myosin
                                                               Created)
            protein)
                                                  Last sequence update)
                                                                                          PRT;
                                                                                          1043
                                                                                          ΑA
                           н
                        heavy
                          chain)
                        (MIHC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            716
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      536
                                                                                                                                                                                                                                                                                                                                           911
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             616
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           416
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           180
                                                                                                                                                                                                            1010
                                                                                                                                                                                                                                      1023
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                656
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          674
                                                                                                                                                                                                                                                                                                                                                                     836
```

```
В
                   Qy
                                               В
                                                                      QУ
                                                                                                  Вр
                                                                                                                       Qy
                                                                                                                                                               Query Match
Best Local
                                                                                                                                                                                                                                                                                                 SMART; SM00015; IQ; 3.
SMART; SM00015; IQ; 3.
SMART; SM00242; MYSG; 1.
PROSITE; PS50096; IQ; 3.
Myosin; Actin-binding; ATP-binding
Multigene family.
                                                                                                                                                      Matches
                                                                                                                                                                                                                 DOMAIN
DOMAIN
NP_BIND
DOMAIN
CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on it use by non-profit institutions as long as its content is in no way.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea Bovidae; Bovinae; Bos.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entitles requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 J. Biochem. 111:302-309(1992).
-!- FUNCTION: INVOLVED IN DIRECTING ACTIN FILAMENTS (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        mRNA."
                                                                                                                                                                                                      SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                       PRINTS; PR00193; MYOSINHEAVY ProDom; PD000355; myosin_head
                                                                                                                                                                                                                                                                                                                                                                                                 Pfam; PF00063; myosin_head;
Pfam; PF00612; IQ; 3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                   PIR; A29483; A29483.
HSSP; P08799; 1MND.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     I heavy chain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Kawakami H., Moriyoshi K., Ut "Structural organization and Theavy Chain":
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TISSUE-Liver
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE OF 1-789
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           J. Biol. Chem. 262:14625-14632(1987).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   "Identification of a new type of mammalian myosin heavy chain molecular cloning. Overlap of its mRNA with preprotachykinin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A. MEDLINE=88033016; PubMed=3667594;
                                                                                                                                                                                                                                                                                 DOMAIN
                                                                                                                                                                                                                                                                                           DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                          InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                      InterPro; IPR000048; IQ_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE=92268028;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Hoshimaru M., Nakanishi S.;
127
                         147
                                                                         87
                                                                                                                           27
                                                 67
                                                                                                  α
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SIMILARITY: CONTAINS 1 MYOSIN-LIKE SIMILARITY: CONTAINS 3 IQ DOMAINS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   taurus (Bovine).
           RGGAVRDRLLQSNPVLEAFGNAKTLRNDNSSRFGKYMDVQFDFKGAPVGGHILSYLLEKS
                                               VGVQDEVLLENETSEAAFIENLRRRFRENLIYTYIGPVLVSVNPYRDLQIYSRQHMERYR
QVNSVKEQLLQSNPVLEAFGNAKTIRNNNSSRFGKYMDIEFDFKGFPLGGVITNYLLEKS
                                                                       GVSFYEVPPHLFAVADTVYRALRTERRDQAVMISGESGAGKTEATKRLLQFYAETCPAPE
                                                                                                 VGVEDLVLLEPLEQE-SLIRNLQLRYEKKEIYTYIGNVLVSVNPYQQLPIYDLEFVAKYR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             J02819; AAA30658.1;
                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                             IPR001609; myosin_head.
0063; myosin_head; 1.
                                                                                                                                                                                                                   1
697
720
743
101
571
708
                                                                                                                                                     Conservative
                                                                                                                                                                                                      AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FROM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PubMed=1587791;
                                                                                                                                                                                                                             681
719
742
772
108
593
                                                                                                                                                               39.0%;
                                                                                                                                                                                                      118868
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   N.A.
                                                                                                                                                                                                                                                                                                                     ATP-binding; Calmodulin-binding;
                                                                                                                                                  185;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Otsumi T., Nakanishi nd expression of the
                                                                                                                                                                                                               IQ 1.
IQ 2.
IQ 3.
ATP (BY SIMILARITY).
ACTIN-BINDING (POTENTIAL).
MISSING (IN REF. 2).
                                                                                                                                                                                                      , WM
                                                                                                                                                               Score 2106.5;
Pred. No. 4.5
                                                                                                                                                                                                                                                                                           MYOSIN
                                                                                                                                                     Mismatches
                                                                                                                                                                                                      581BE91EA508DB3C CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             THE MOVEMENT
                                                                                                                                                                                                                                                                                             HEAD-LIKE
                                                                                                                                                                 4.5e-126;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GLOBULAR
                                                                                                                                                                           DB 1;
                                                                                                                                                     330;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 i s.;
gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     HEAD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             OF ORGANELLES
                                                                                                                                                     Indels
                                                                                                                                                                           Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  bovine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Bovoidea;
                                                                                                                                                                             1043;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   a collaboration - MBL outstation
                                                                                                                                                     65;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  myosin
                                                                                                                                                  Gaps
                                                 126
                                                                         146
                                                                                                                           86
186
                      206
                                                                                                  66
                                                                                                                                                   21;
```

```
RESULT 5
MY1A_MOUSE
ID A 46735
AC P46735
DT 16-OCT
DT 15-JUN
DE MYOSIN
GN MYOIA.
OS MUS MU
OC EUKARY
OC MAMMAI
                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                               δ
                                                                                                                                                                              В
                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                       dd
                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                  DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            õ
                                                 MYIA_MOUSE STAN
P46735; P70244;
01-NOV-1995 (Rel. 3
16-OCT-2001 (Rel. 4
15-JUN-2002 (Rel. 4
Myosin IA (Myosin I
   Eukaryota; Metazoa; Chordata; Mammalia; Eutheria; Rodentia;
                                                                                                                                                                              1010
                                                                                                                                                                                                                             950
                                                                                                                                                                                                                                                                             890
                                                                                                                                                                                                                                                                                                    899
                                                                                                                                                                                                                                                                                                                           831
                                                                                                                                                                                                                                                                                                                                                843
                                                                                                                                                                                                                                                                                                                                                                        780
                                                                                                                                                                                                                                                                                                                                                                                                                        720
                                                                                                                                                                                                                                                                                                                                                                                               789
                                                                                                                                                                                                                                                                                                                                                                                                                                             738
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           678
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          618
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          560
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      383
                             musculus (Mouse)
                                                                                                                                                                          GSLTVKVIQGPGGGG
                                                                                                                                                                                                   GSIT--FAGGPGRDG
                                                                                                                                                                                                                                          DSLFVLHVQREDN-KQKGDVVLQSDHVIETLTK---TALSADRVN-----NININQ
                                                                                                                                                                                                                   DGLFSLHLSEISSVGSKGEFLLVSEHVIELLTKICRATLDATQMQLPVTVTEEFSVKFKE
                                                                                                                                                                                                                                                                               --PIQYAVPVVKYDRKGYKPRPROLLLTPSAVVI--VEDAKVKQRIDYANLTGISVSSLS
                                                                                                                                                                                                                                                                                                                KFRDQLSPKQVEVLREKLCASELFKGKKASYPQSVPIPFHGDYIGLQR-NPKLQKLKGGE
                                                                                                                                                                                                                                                                 EGPILMAETVVKVNRGNAKTSSRILLLTKGHVIITDMKNPQAKTVIPLNSLAGVSVTSFK
                                                                                                                                                                                                                                                                                                                                                                 YKSMVQ-KELLGLKNDLPSPSILDKKWPSAPYKYFNTANHELQRLFHQ
                                                                                                                                                                                                                                                                                                                                                                                    FLDHVRASFLLNLRRQLPR-NVLDTSWPTPP-----PALREASELLRELCMKNMVWKYCR
                                                                                                                                                                                                                                                                                                                                                                                                                             VKRSAICIQSWWRGTLGRRKAAKRKWAAQTIRRLIRGEILRHSPR------
                                                                                                                                                                                                                                                                                                                             ----SISPEWKOQLQQKAVASEIFKGKKDNYPQSVPRLFISTRLGTEEISPRVLQSLGSE
                                                                                                                                                                                                                                                                                                                                                                                                            MRKSQIVISSWERGNMQKKHYRKMKASALLIQAFVRGWKARKNYRKYFRSGAALILSNFI
                                                                                                                                                                                                                                                                                                                                                                                                                                                          VLGELSMSSEELAFGKTKIFIRSPKTLFYLEEQRRLRLQQLATLIQKTYRGWRCRTHYQL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NPIMAQCEDKSE--LSDKKRPETVATQEKMSLLQLVEILRSKEPAYIRCIKPNDAKQPGR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FSFELVSVQAQYLGLLENVRVRRAGYAYRQAYGSFLERYRLLSRSTWPRWNGGDQEGVEK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FDEVLIRHQVKYLGLMENLRVRRAGFAYRRKYEAFLQRYKSLCPETWPMWAGRPQDGVAV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       KREGIPWVKVEYFDNGIICNLIEHNQRGILAMLDEECLRPGVVSDSTFLAKLNQLFSKHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ASKDAESPSWRSTTVLGLLDIYGFEVFQHNSFEQFCINYCNEKLQQLFIELTLKSEQEEY 442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HPLLRSLFPEGDFKQASLKRPPTAGAQFKSSVTTLMKNLYSKNPNYIRCIKPNEHQQRGH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              KVGTGE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LGVEGTTLREALTHRKITAKGEELLSPLNLEQAAYARDALAKAVYSRTFTWLVRKINRSL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VLQSAMTVIGFSDEEIRQVLEVAALVLKLGNVELINEFQANGVPASGIRDGRGVQEIGEL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VGLNSVELERALCSRTMETAKEKVVTTLNVIQAQYARDALAKNIYSRLFNWLVNRINESI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VMRKALSVIDFTEDEVEDLLSIVASVLHLGNIHFAADEDSN----AQVTTENQLKYLTRL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RVVKQLEGERNFHIFYQLLAGADAQLLKALKLERDTGGYAYL-NPDTSRVDGMDDDANFK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RVVHQNHGERNFHVFYQLLEGGEEETLRRLGLERNPQSYLYLVKGQCAKVSSINDKSDWK
                                                                                                              STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     --KRKVMGVLDIYGFEILEDNSFEQFVINYCNEKLQQVFIEMTLKEEQEEY
                                           32, Created)
40, Last sequence update)
41, Last annotation update)
1 Ialpha) (MMI-alpha) (MMIa)
                                                                                                                                                                                                 1014
 Sciurognathi;
           Craniata; Vertebrata; Euteleostomi;
                                                                                                             1107
  Muridae;
                                               (MIH-L)
Murinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                      -CPENAF
                                                                                                                                                                                                                                                                                                                                                                 -WK -CK
                                                                                                                                                                                                                                           1001
                                                                                                                                                                                                                                                                                                                  889
                                                                                                                                                                                                                                                                                                                                         898
                                                                                                                                                                                                                                                                                                                                                                 830
                                                                                                                                                                                                                                                                                                                                                                                      842
                                                                                                                                                                                                                                                                                           954
                                                                                                                                                                                                                                                                                                                                                                                                               779
                                                                                                                                                                                                                                                                                                                                                                                                                                    788
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  737
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            659
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 677
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  617
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         266
```

```
Query Match
Best Local S
Matches 463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A KOSLOVSKY J.S., Qian C., Jiang X., Mercer J.A.;

T "Molecular cloning of a mouse myosin I expressed in brain.";

FEBS Lett. 320:121-124(1993).

C -!- FUNCTION: MOTOR PROTEIN THAT MAY PARTICIPATE IN PROCESS CRITICAL

TO NEURONAL DEVELOPMENT AND FUNCTION SUCH AS CELL MIGRATION,

C NEURITE OUTGROWTH AND VESICULAR TRANSPORT.

C -!- ALTERNATIVE PRODUCTS: 2 ISOFORMS; 1 (SHOWN HERE) AND 2; ARE

PRODUCED BY ALTERNATIVE SPLICING.

C -!- TISSUE SPECIFICITY: PROMITURE EXPRESSION IS SEEN IN THE BRAIN,

LUNG AND LIVER. IT IS ALSO EXPRESSED IN THE HEART AND TESTIS. A

HIGH LEVEL EXPRESSION IS SEEN IN VERTUALLY ALL NEURONS (BUT NOT

THE CEREBELLAR EXTERNAL AND ADULT MOUSE BRAIN AND IN NEUROBLASTS OF

"!- SIMILARITY: CONTAINS 1 MYOSIN-LIKE GLOBULAR HEAD DOMAIN.

""SIMILARITY: CONTAINS 5 IQ DOMAINS.
                                                                       CONFLICT
CONFLICT
CONFLICT
CONFLICT
CONFLICT
CONFLICT
CONFLICT
CONFLICT
                                                            SEQUENCE
                                                                                                                                                                                               DOMAIN
NP_BIND
                                                                                                                                                                                                                                                                                           SMART; SM00015; IQ; 5.
SMART; SM00242; MYSC;
PROSITE; PS50096; IQ;
                                                                                                                                                                        VARSPLIC
                                                                                                                                                                                                                                                            DOMAIN
                                                                                                                                                                                                                                                                                                                              InterPro; IPR000048; IQ_region.
InterPro; IPR001609; myosin_head.
Pfam; PF00063; myosin_head; 1.
Pfam; PF00611; IQ; 5.
PRINTS; PR00193; MYOSINHEAVY.
PRODOM; PD000355; myosin_head; 1.
SMART. SMOONES
                                                                                                                                                                                                                                                                                                                                                                                                       EMBL; L00923; AAA39800.
EMBL; X69987; CAA49604.
HSSP; P08799; INND.
MGD; MGI:107732; MyOla.
                                                                                                                                                                                      DOMAIN
                                                                                                                                                                                                                         DOMAIN
                                                                                                                                                                                                                                        DOMAIN
                                                                                                                                                                                                                                                  DOMAIN
                                                                                                                                                                                                                                                                                      Myosin;
                                                                                                                                                                                                                                                                                                                                                                                                                                                               use by non-profit institutions as long modified and this statement is not removed. entitles requires a license agreement (See or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              This SWISS-PROT entry is copyright. It is produced through a collable tween the Swiss Institute of Bioinformatics and the EMBL outst the European Bioinformatics Institute. There are no restrictions use by non-profit institutions as long as its content is in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sherr E.H., Joyce M.P., Greene L.A.; "Mammalian myosin I alpha, I beta, a genes of the myosin I family."; J. Cell Biol. 120:1405-1416(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE OF 13-1107 FROM N.A. (ISOFORM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A. (ISOFORM 1).
STRAIN-C57BL/6; TISSUE-Cerebellum;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDLINE=93209370; PubMed=8458427;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STRAIN-C57BL/6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDLINE=93194946;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NCBI_TaxID=10090;
[1]
              463;
                       Similarity
                                                                                                                                                                                                                                                                                 ATP-binding; Actin-binding;
                                                          Family;
704
728
750
780
808
108
108
592
791
44
260
304
307
333
546
570
742
          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                AAA39800.1; -. CAA49604.1; -.
                                                           AΑ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TISSUE-Brain;
                                                                       749
778
807
837
115
599
819
44
260
304
317
317
333
546
571
                                                                                                                                                                                                                                                            Alternative
727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PubMed=8449986;
                      38.7%;
41.7%;
                                                          128527
1.78;
                                                                  ACTIN-BINDING (POTENTIAL).

MISSING (IN ISOFORM 2).

I -> R (IN REF. 2).

I -> Y (IN REF. 2).

N -> I (IN REF. 1).

KEICELTSIDO -> NEKFASRPASVK ()

O -> R (IN REF. 1).

G -> D (IN REF. 1).

AG -> RS (IN REF. 2).

A -> E (IN REF. 2).
                                                          MW;
                                                                                                                                                                                         ve splicing.
IQ 1.
IQ 2.
IQ 3.
IQ 4.
IQ 5.
ATP (POTENTIAL).
                   Score 2090.5;
Pred. No. 5.1
         Mismatches
                                                      FA244E5D2DE752A5 CRC64;
                                                                                                                                                                                                                                                                              Calmodulin-binding;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          and
                    5.1e-125;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     gamma: new widely expressed
                             DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Usage
      Indels 119;
                            Length 1107;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       γď
                                                                                                                                                                                                                                                                             Repeat;
                                                                                                                  (IN REF.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EMBL outstation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         a collaboration -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CRITICAL
     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   in no way
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            on
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Q.
     19;
```

```
1023
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               488
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                147
                                          963
                                                                                                                                                                       906
                                                                                                                                                                                                             849
                                                                                                                                                                                                                                                          848
                                                                                                                                                                                                                                                                                                                                                                                                                                  728
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    899
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         809
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    619
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              548
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      561
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       503
                                                                                                                                                                                                                                                                                                  793
                                                                                                                                                                                                                                                                                                                                               788
                                                                                                                                                                                                                                                                                                                                                                                       788
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TSIDQVVLERAFSFRTVEAKQEKVSTTLNVAQAYYARDALAKNLYSRLFSWLVNRINESI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TVRNAMQIVGFLDHEAEAVLEVVAAVLKLGNIEFKPESRVNGLDESKIKDKNELKEICEL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         VMRKALSVIDFTEDEVEDLLSIVASVLHLGNIHFAADEDSN----AQVTTENQLKYLTRL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RGGAVRDRILLQSNPVLEAFGNAKTLRNDNSSRFGKYMDVQFDFKGAPVGGHILSYLLEKS 206
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NRNFYELSPHIFALSDEAYRSLRDQDKDQCILITGESGAGKTEASKLVMSYVAAVCGKGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VGVQDFVLLENFTSEAAFIENLRRRFRENLIYTYIGPVLVSVNPYRDLQIYSRQHMERYR 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PIMAQCFDKSELS--DKKRPETVATQFKMSLLQLVEILRSKEPAYIRCIKPNDAKQPGRF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LGVEGTTLREALTHRKIIAKGEELLSPLNLEQAAYARDALAKAVYSRTFTWLVRKINRSL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RVVHQNHGERNPHVFYQLLEGGEEETLRRLGLERNPQSYLYLVKGQCAKVSSINDKSDWK 266
                                                                                                           PVVKYDRKGYKPRPRQLLLTPSAVVIVE--DAKVKQRIDYANLTGISVSSLSDSLFVLHV
                                                                                                                                                                                                    KQQLQQKAVASEIFKGKKDNYPQSVPRLFISTRLGTEEISP----RVLQSLGSEPIQYAV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VRHLGYKPEEYKMGRTKIFIRFPKTLFATEDSLEVRRQSLATKIQAAWRGFHWRQKFLRV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DEVLIRHQVKYLGLMENLRVRRAGFAYRRKYEAFLQRYKSLCPETWPMWAGRPQDGVAVL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 HFLTH--KLADOKTRKSLDRGEFRLLHYAGEVTYSVTGFLDKNNDLLFRNLKETMCSSMN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 IREDIEWTHIDYFNNAIICDLIENNTNGILAMLDEECLRPGTVTDETFLEKLNQVCATHQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EAEGIAWEPVQYFNNKIICDLVEEKFKGIISILDEECLRPGEATDLTFLEKLEDTVKPHP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RVVKQPRGERNFHVFYQLLSGASEELLYKLKLERDFSRYNYL-SLDSAKVNGVDDAANFR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EVNQVKEQLLQSNPVLEAFGNAKTVRNDNSSRFGKYMDIEFDFKGDPLGGVISNYLLEKS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             IGVGDMVLLEPL-NEETFIDNLKKRFDHNEIYTYIGSVVISVNPYRSLPIYSPEKVEDYR
KEGSEAASKGDFLFSSDHLIEMATKLYRTTLSQTKQKLNIEISDEFLVQFRQDKVCVKFI
                                      QR-EDNKQKGDVVLQSDHVIETLTK---TALSADRVN-NINI-----NQGSITFA
                                                                                  VVNKINRANGKSTSRIFLLTNNNLLLADQKSGQIKSEVPLVDVTKVSMSSQNDGFFAVHL
                                                                                                                                                                   KLIYEEKLEASELFKDKKALYPSSVGQPFQGAYL---EINKNPKYKKLKDAIEEKIIIAE
                                                                                                                                                                                                                                                     IVQKYLLEMKNKMPSLSPIDKNWPSRPYLFLDSTH--KELKRIFHLWRCKKYRDQFTDQQ
                                                                                                                                                                                                                                                                                                  VRASFLLNLRRQLPR-NVLDTSWPTPPPALREASELLRELCMKNMVW----KYCRSISPEW
                                                                                                                                                                                                                                                                                                                                          AYWHGTQARRELKRLKEEARRNDAVAVIWAYWLGLKVRREYRKFFRANAGKKIYEFTLQR
                                                                                                                                                                                                                                                                                                                                                                                                                               KRSQVVIAAWYRRYAQQKRYQQIKSSALVIQSYIRGWKARKILRELKHQKRCKEAATTIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KRSAICIQSWWRGTLGRRKAAKRKWAAQTIRRLIRGF----ILRHSPRCPENA----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FNELEIPVEEHSFGRSKIFIRNPRTLFQLEDLRKQRLEDLATLIQKIYRGWKCRTHFLLM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NESLVCHQIRYLGLLENVRVRRAGYAFRQAYEPCLERYKMLCKQTWPHWKGPARSGVEVL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SLIKSLFPEGNPAKVNLKRPPTAGSQFKASVATLMRNLQTKNPNYIRCIKPNDKKAAHIF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            HFESRMSKCSRFLNDTTLPHSCFRIQHYAGKVLYQVEGFVDKNNDLLYRDLSQAMWKAGH
                                                                                                                                                                                                                                                                                                                                                                                     ·----FFLDH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           372
                                                                                1022
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      193
                                                                                                                          962
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    618
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             73
                                                                                                                                                                                                                                                                                                                                                                                                                               787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    727
```

Š

Dy Oy 8 8 8

밁

5 B 5

В

Qy ₽ δÃ В δÃ 밁 õ 밁 Q 망 ρy 망 Ş В δ 밁 Ş В Qy B Qy В õ

뮹

```
RESULT AND 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Qy
                  Query Match
Best Local
  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Q05096;
16-OCT-2001 (Rel. 4
16-OCT-2001 (Rel. 4
16-OCT-2001 (Rel. 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             J. Cell Biol. 120:1393-1403(1993).

-i- FUNCTION: MOTOR PROTEIN THAT MAY PARTICIPATE IN PROCESS CI-

-i- FUNCTION: MOTOR PROTEIN THAT MAY PARTICIPATE IN PROCESS CI-

TO NEURINE SEVELOPMENT AND FUNCTION SUCH AS CELL MICRATIV

NEURITE OUTGROWTH AND VESICULAR TRANSPORT (BY SIMILARITY)

-i- ALTERNATIVE PRODUCTS: 3 ISOFORMS; A (SHOWN HERE), B AND C

-i- SIMILARITY: CONTAINS 1 MYOSIN-LIKE GLOBULAR HEAD DOMAIN.

-i- SIMILARITY: CONTAINS 5 IQ DOMAINS.
                                                                                                                                                            DOMAIN
NP_BIND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1083
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1008
                                                                           VARSPLIC
VARSPLIC
SEQUENCE
                                                                                                                                                                                                   DOMAIN
DOMAIN
                                                                                                                                                                                                                                         DOMAIN
DOMAIN
                                                                                                                                                                                                                                                                                                                                                        PRINTS; PRO0193; MYOSINHEAVY.
ProDom; PD000355; myosin_head;
SMART; SM00115; 10; 6.
SMART; SM00242; MYSC; 1.
PROSITE; PS50096; 10; 5.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              This
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STRAIN=Sprague-Dawley;
MEDLINE=93194945; PubMed=8449985;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Rattus norvegicus (Rat).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pfam; PF00063; myosin_head; 1. Pfam; PF00612; IQ; 6.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EMBL; X68199; HSSP; P08799;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             use by non-profit institutions as long modified and this statement is not removed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  myosin-I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ruppert C., Kroschewski R., Baehler M. "Identification, characterization and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NCBI_TaxID=10116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MYO1A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Myosin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MY1A_RAT
                                                                                                                                                                                                                                                                                     DOMAIN
                                                                                                                                                                                                                                                                                                     DOMAIN
                                                                                                                                                                                                                                                                                                                            Multigene
                                                                                                                                                                                                                                                                                                                                             Myosin; ATP-binding;
                                                                                                                                         DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                s SWISS-PROT entry is copyright. It is produced through a collaboration ween the Swiss Institute of Bioinformatics and the EMBL outstation - European Bioinformatics Institute. There are no restrictions on its by non-profit institutions as long as its content is in no way
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     QGNQKNGSVP---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGPGRDGIIDFTSGSELLITKAKNGHLAVVA 1038
  463;
                    Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         IPR001609; myosin_head.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (Myosin
                                                                                                                                                                                                                                                                                                                          family;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            IPR000048; IQ_region
                                                                             704
730
750
780
808
808
837
108
592
794
1136
  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1MND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CAA48287.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STANDARD;
                                                                               AΑ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          40, Created)
40, Last sequence update)
40, Last annotation update)
1 alpha) (MMI-alpha) (MMIa)
                                                                                                                                                                                                                                                                                                                          Alternative
                                                                                                 729
750
778
807
837
866
115
599
823
852
                                                                                                                                                                                                                                                                                                     703
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ----TCKRKNNRLLEVA 1105
                  38.5%;
                                                                                                                                                                                                                                                                                                                                           Actin-binding; Calmodulin-binding; Repeat;
                                                                               131917
183;
                                                                        IQ 1.
IQ 2.
IQ 3.
IQ 4.
IQ 5.
IQ 6.
ATP (POTENTIAL).
ACTIN-BLNDING (POTENTI MISSING (IN ISOFORM 1B MISSING IN ISOFORM 1C MW; 69D6C2A84E9070E2 C
                  Score
Pred.
                                                                                                                                                                                                                                                                                                     MYOSIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Craniata; Veri
Sciurognathi;
                                                                                                                                                                                                                                                                                                                          splicing
                                                                                                                                                                                                                                                                                                                                                                                                                          ۳
  Mismatches
                      2080;
No. 2
                    No.
                                                                                                                                                                                                                                                                                                     HEAD-LIKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   f.;
i cloning
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Vertebrata; Euteleostomi;
thi; Muridae; Murinae; Rat
                    .4e-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A
                                     BB
                                                                                                                                     (POTENTIAL).
  346;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Usage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (Myosin heavy chain
                                                                           1 1B).
1 1C).
12 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     myr 1,
                                     Length 1136;
  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 þγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MIGRATION,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       þ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     mammalian
  148;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CRITICAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Rattus
  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 myr
  19;
```

```
1023
                990
                                                                                                                     966
                                                                                                                                                    880
                                                                                                                                                                                      908
                                                                                                                                                                                                                      823
                                                                                                                                                                                                                                                                                                                        788
                                                                                                                                                                                                                                                                                                                                                          788
                                                                                                                                                                                                                                                                                                                                                                                           728
                                                                                                                                                                                                                                                                                                                                                                                                                           739
                                                                                                                                                                                                                                                                                                                                                                                                                                                             899
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              809
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               619
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 548
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    488
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  27
          SADRVN-NINI --
                                GQIKSEVPLVDVTKVSMSSQNDGFFAVHLKEGSEAASKGDFLFSSDHLIEMATKLYRTTL 1082
                                                         AKVKQRIDYANLTGISVSSLSDSLFVLHVQR-EDNKQKGDVVLQSDHVIETLTK---TAL 989
                                                                                                     AYL---EINKNPKYKKLKDAIEEKIIIAEVVNKINRANGKSTSRIFLLTNNNLLLADQKS
                                                                                                                                     TRLGTEEISP----RVLQSLGSEPIQYAVPVVKYDRKGYKPRPRQLLLTPSAVVIVE--D
                                                                                                                                                                      DSTH---KELKRIFHLWRCKKYRDQFTDQQKLIYEEKLEASELFKDKKALYPSSVGQPFQG
                                                                                                                                                                                           EASELLRELCMKNMVW---KYCRSISPEWKQQLQQKAVASEIFKGKKDNYPQSVPRLFIS
                                                                                                                                                                                                                                        WLGLKVRREYRKFFRANAGKKIYEFTLQRIVQKYLLEMKNKMPSLSPIDKNWPSRPYLFL
                                                                                                                                                                                                                                                                                                         AYWHGTQARKERRRLKDEARNKHATAVIWAFWLGSKARRELKRLKEEARRKHAVAVIWAY
                                                                                                                                                                                                                                                                                                                                                                                                           KRSAICIQSWWRGTLGRRKAAKRKWAAQTIRRLIRGF----ILRHSPRCPENA----
                                                                                                                                                                                                                                                                                                                                                                                                                                             FNELEIPVEEYSEGRSKIFIRNPRTLEQLEDLRKQRLEDLATLIQKIYRGWKCRTHELLM
                                                                                                                                                                                                                                                                                                                                                                            KRSQVVIAAWYRRYAQQKRYQQIKSSALVIQSYIRGWKARKILRELKHQKRCKEAATTIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VRHLGYKPEEYKMGRTKIFIREPKTLFATEDSLEVRRQSLATKIQAAWRGEHWRQKELRV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PIMAOCFDKSELS--DKKRPETVATQFKWSLLQLVEILRSKEPAYIRCIKDNDAKQPGRF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SESLVCHQIRYLGLLENVRVRRAGYAFRQAYEPCLERYKMLCKQTWPHWKGPARSGVEVL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DEVLIRHOVKYLGLMENLRVRRAGFAYRRKYEAFLORYKSLCPETWPMWAGRPODGVAVL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HFLTH--KLADQKTRKSLDRGEFRLLHYAGEVTYSVTGFLDKNNDLLFRNLKETMCSSMN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EAEGIAMEPVQYFNNKIICDLVEEKFKGIISILDEECLRPGEATDLTFLEKLEDTVKPHP 502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ASKDAESPSWRSTTVLGLLDIYGFEVFOHNSFEQFCINYCNEKLQQLFIELTLKSEQEEY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ALIKSLEPEGNPAKVNLKRPPTAGSQEKASVATLMKNLQTKNPNYIRCIKPNDKKAAHIF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HFESRMSKCSRFLNDTTLPHSCFRIQHYAGKVLYQVEGFVDKNNDLLYRDLSQAMWKAGH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       IREDIEWTHIDYFNNAIICDLIENNTNGILAMLDEECLRPGTVTDETFLEKLNQVCATHQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KAQTKVRKK-----VMGVLDIYGFEIFEDNSFEQFIINYCNEKLQQIFIELTLKEEQEEY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TVRNAMQIVGFSDPEAESVLEVVAAVLKLGNIEFKPESRMNGLDESKIKDKNELKEICEL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RVVKQPRGERNFHVFYQLLSGASEELLHKLKLERDFSRYNYL-SLDSAKVNGVDDAANFR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RVVHONHGERNFHVFYQLLEGGEEETLRRLGLERNPQSYLYLVKGQCAKVSSINDKSDWK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EVNQVKEQLLQSTPVLEAFGNAKTVRNDNSSRFGKYMDIEFDFKGDPLGGVISNYLLEKS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RGGAVRDRLLQSNPVLEAFGNAKTLRNDNSSRFGKYMDVQFDFKGAPVGGHILSYLLEKS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NRNFYELSPHIFALSDEAYRSLRDQDKDQCILITGESGAGKTEASKLVMSYVAAVCGKGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GVSFYEVPPHLFAVADTVYRALRTERRDQAVMISGESGAGKTEATKRLLQFYAETCPAPE :|| : | | : : : | |
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   IGVGDTVLLEPL-NEETFIDNLKKRFDHNEIYTYIGSVVISVNPYRSLPIYSPEKVEDYR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VGVQDEVLLENETSEAAFIENLRRRFRENLIYTVIGPVLVSVNPYRDLQIYSRQHMERYR
                                                                                                                                                                                                                                                                     ------FFLDHVRASFLLNLRRQLPR-NVLDTSWPTPPPALR
--NQGSITFAGGPGRDGIIDFTSGSELLITKAKNGHLAVVA
                                                                                                      1022
                                                                                                                                                                       965
                                                                                                                                                                                                        879
                                                                                                                                                                                                                                          907
                                                                                                                                                                                                                                                                           822
                                                                                                                                                                                                                                                                                                           847
                                                                                                                                                                                                                                                                                                                                                                              787
                                                                                                                                                                                                                                                                                                                                             787
                                                                                                                                                                                                                                                                                                                                                                                                             787
                                                                                                                                                                                                                                                                                                                                                                                                                                               727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  678
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     618
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   86
```

Š 망 Ş 밁 Š В Š дЬ δÃ В ő В δ дЬ Š В Q В Ş Ъ δ g õ 밁 Š Дb δ В δ da δ В Š В õ 밁 õ

```
MYHL_HUMAN

ID WHYHL_H

AC Q9UBC5

DT 16-OCT

DT 16-OCT

DT 16-OCT

DT 16-OCT

DT 16-OCT

DT 16-OCT

ON MYHL.

GN MHH.

GN MYHL.

GN MHH.

GN MYHL.

GN MHH.

GN MYHL.

GN MHH.

GN MYH.

GN MH.

GN MYH.

GN MHH.

GN MYH.

GN MHH.

GN MHH.

GN MHH.

GN MHH.

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Дb
                                                                                                                                                   Myosin; Ac
Multigene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MYHL_HUMAN STANDARD
Q9UBC5; Q9UQD7;
16-OCT-2001 (Rel. 40, C
16-OCT-2001 (Rel. 40, L
16-OCT-2001 (Rel. 40, L
                                                                                                                                                                                                                                                    Pfam; PF00063; myosin_head; 1.
Pfam; PF00612; IQ; 3.
PFINTS; PR00193; MYOSINHEAVY.
ProDom; PD000355; myosin_head;
                                                                                                                                                                                             PROSITE; PS50096;
                                                                                                                                                                                                                                                                                                                                                                                                   EMBL; AF127026; AAD31189.1; -. EMBL; AF105424; AAC78645.1; -. EMBL; AF009961; AAC7437.1; -. HSSP; P08799; IMND.
Genew; HGNC:7595; MYO1A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                InterPro; IPR000048; IQ_region.
InterPro; IPR001609; myosin_head.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TISSUE-Jejunal brush border;
MEDLINE-20119970; pubMed=10653589;
Li W., Wang J., Coluccio L.M., Matsudaira
"Brush border myosin I (BBMI): a basally 1
jejunal enterocytes.";
J. Histochem. Cytochem. 48:89-94(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACTIN FILAMENTS (POTENTIAL).
-!- SIMILARITY: CONTAINS 1 MYOSIN-LIKE GLOBULAR HEAD DOMAIN
-!- SIMILARITY: CONTAINS 3 IQ DOMAINS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 intestine and Caco-2888 cs... (1998) Cell Motil. Cytoskeleton 41:308-324(1998)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.

MEDLINE=99073867; PubMed=9858156;
Skowron J.F., Bement W.M., Mooseker M.S.;
"Human brush border myosin-I and myosin-Ic expression in intestine and Caco-2BBe cells";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TISSUE=Intestine;
Bikle D.D., Munson S.J.;
"Human brush border myosin
Submitted (FEB-1999) to the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens (Human)
Eukaryota; Metazoa; (
Mammalia; Eutheria; I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Brush border
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1083
                                                                                                                                                                                m; PDUVVVI
; SM00015; IQ; 3.
f; SM00242; MYSC; 1.
f; SM00242; MYSC; 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SQTKQKLNIEISDEFLVQFRQDKVCVKFIQGNQKNGSVP-
                                                                                                                                                                    Actin-binding;
                                                                                                                                            family.
            1
697
720
743
101
571
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STANDARD;
            681
719
742
772
772
108
593
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Chordata;
Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Created)
Last sequence update)
Last annotation update)
(BBM-I) (BBMI) (Myosin I heavy chain) (MIHC).
                                                                                                                                                               ATP-binding;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          the
MYOSIN HEAD-LIKE
IQ 1.
IQ 2.
IQ 3.
ATP (POTENTIAL).
ACTIN-BINDING (P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   I.";
e EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Craniata; Vertebrata; | Catarrhini; Hominidae;
                                                                                                                                                           Calmodulin-binding;
                                                                                                                    HEAD-LIKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1043
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MOVEMENT OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           P., Grand R.J.;
localized transcript in
(POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AΑ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ---TCKRKNNRLLEVA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANELLES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo
                                                                                                                                                           Repeat;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ALONG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1134
```

```
망
                                                                                                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                   20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 рь
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Q
Ş
                                                      Š
                                                                                  B
                                                                                                            ρ
                                                                                                                                          B
                                                                                                                                                                 Qy
                                                                                                                                                                                                  밁
                                                                                                                                                                                                                         Q
                                                                                                                                                                                                                                                        Вþ
                                                                                                                                                                                                                                                                              δÃ
                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                    Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FF
                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CONFLICT
CONFLICT
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  147
 959
                              894
                                                                                     835
                                                                                                                                                                                                                                                        859
                                                                                                                                                                                                                                                                                  676
                                                                                                                                                                                                                                                                                                              598
                                                                                                                                                                                                                                                                                                                                          616
                                                                                                                                                                                                                                                                                                                                                                      538
                                                                                                                                                                                                                                                                                                                                                                                                  558
                                                                                                                                                                                                                                                                                                                                                                                                                              480
                                                                                                                                                                                                                                                                                                                                                                                                                                                          502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           207
                                                         901
                                                                                                                                           778
                                                                                                                                                                      792
                                                                                                                                                                                                                            736
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DYTFYELKPHIYALANVAYQSLRDRDRDQCILITGESGSGKTEASKLVMSYVAAVCGKGE 126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GVSFYEVPPHLFAVADTVYRALRTERRDQAVMISGESGAGKTEATKRLLQFYAETCPAPE 146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VGVEDLVLLEPLVEE-SLLKNLQLRYENKEIYTYIGNVVISVNPYQQLPIYGPEFIAKYQ 66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VGVQDFVLLENFTSEAAFIENLRRRFRENLIYTYIGPVLVSVNPYRDLQIYSRQHMERYR 86
                                                                                                                                                                                                                                                                                                                                                                                     SMNPIMAQCEDKS--ELSDKKRPETVATQFKMSLLQLVEILRSKEPAYIRCIKPNDAKQP 615
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VMRKALSVIDFTEDEVEDLLSIVASVLHLGNIHFAADEDSNAQVTTE-----NQLKYLTR 321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RVVHQNHGERNFHVFYQLLEGGEEETLRRLGLERNPQSYLYLVKGQCAKVSSINDKSDWK 266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    QVNSVKEQLLQSNPVLEAFGNAKTIRNNNSSRFGKYMDIEFDFKGSPLGGVITNYLLEKS 186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RGGAVRDRLLQSNPVLEAFGNAKTLRNDNSSRFGKYMDVQFDFKGAPVGGHILSYLLEKS 206
                                             QYAVPVVKYDRKGYKPRPRQLLLTPSAVVIVEDAKVKQR--IDYANLTGISVSSLSDSLF
                                                                                OLSPKQVEILREKLCASELFKGKKASYPQSVPIPFCGDYIGLQG-NPKLQKLKGGEEGPV
                                                                                                                                       FIYKSMYQKFLLGLKNNLPSTNYLDKTWPAAPYKCLSTANQELQQLFYQ---WKCKRFRD
                                                                                                                                                                                                                                                                                                                            GREDEVLIRHQVKYLGLMENLRVRRAGFAYRRKYEAFLQRYKSLCPETWPMWAGRPQDGV 675
                                                                                                                                                                                                                                                                                                                                                                                                                           GHY--ESKVTQNAQRQYDHTMGLSCFRICHYAGKVTYNVTSFIDKNNDLLFRDLLQAMWK
                                                                                                                                                                                                                                                                                                                                                                                                                                          PHFLTHKLADQKTRKSLDR-----GEFRLLHYAGEVTYSVTGFLDKNNDLLFRNLKETMCS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   YKREGIPWTKVDYFDNGIICKLIEHNQRGILAMLDEECLRPGVVSDSTFLAKLNQLFSKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LASKDAESPSWRSTTVLGLLDIYGFEVFQHNSFEQFCINYCNEKLQQLFIELTLKSEQEE 441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MVGLNSEEVERALCSRTMETAKEKVVTALNVMQAQYARDALAKNIYSRLFDWIVNRINES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AVQSAMAVIGFSEEEIRQVLEVTSMVLKLGNV-LVADEFQASGIPASGIRDGRGVREIGE
                                                                                                              SISPEWKQQLQQKAVASEIFKGKKDNYPQSVPRLFISTRLGTEEISPRVLQSLGSE--PI
                                                                                                                                                                   HVRAS - - - - FLLNLRRQLP - RNVLDTSWPTPP - PALREASELLRELCMKNMVWKYCR - - -
                                                                                                                                                                                                QLMRKSQILISSWFRGNMQKKCYGKIKASVLLIQAFVRGWKARKNYRKYFRSEAALTLAD
                                                                                                                                                                                                                           LRVKRSAICIQSWWRGTLGRRKAAKRKWAAQTIRRLIRGFILRHSPR----CPENAFFL-D
                                                                                                                                                                                                                                                                                 AVLVRHLGYKPEEYKMGRTKIFIRFPKTLFATEDSLEVRRQSLATKIQAAWRGFHWRQKF 735
                                                                                                                                                                                                                                                                                                             GQFSSDLVATQARYLGLLENVRVRRAGYAHRQGYGPFLERYRLLSRSTWPHWNGGDREGV
                                                                                                                                                                                                                                                                                                                                                                   AQHPLLRSLFPEGNPKQASLKRPPTAGAQFKSSVAILMKNLYSKSPNYIRCIKPNEHQQR 597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RLVKQLKGERNFHIFYQLLAGADEQLLKALKLERDTTGYAYL-NHEVSRVDGMDDASSFR
                             LMAEAVKKVNRGNGKTSSRILLLTKGHVILTDTKKSQAKIVIGLDNVAGVSVTSLKDGLF
                                                                                                                                                                                                                                                      EKVLGELSMSSGELAFGKTKIFIRSPKTLFYLEEQRRLRLQQLATLIQKIYRGWRCRTHY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  446
712
1043
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 446
712
; 118400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         38.2%;
44.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            186;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MW,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 2064.5;
Pred. No. 2.16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  · ·
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 > P (IN REF. 3).
> G (IN REF. 3).
EE5D79D9D6E085DC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         .1e-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            320;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1043;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          43;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           419
                                                                                                                                                                                                777
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            19;
```

```
RESULT 8
MYHL_CHICK
    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3D-STRUCTURE MODELING OF 699-731.
MEDLINE-97148341; PubMed-8994973;
MEDLINE-97148341; PubMed-8994973;
MEDLINE-97148341; PubMed-8994973;
HOudusse A., Silver M., Cohen C.;
"A model of Ca(2+)-free calmodulin binding to unconventional reveals how calmodulin acts as a regulatory switch.";
Structure 4:1475-1490(1996).
-!- FUNCTION: COULD PLAY AN IMPORTANT ROLE IN MORPHOGENESIS /
FUNCTION OF INTESTINAL MICROVILLI.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         J. Cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mooseker M., Louvard D., Arpin M.;
"Partial deduced sequence of the 110-kD-calmodulin avian intestinal microvillus shows that this mechan member of the myosin I family.";
J. Cell Biol. 109:2895-2903(1989).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WYHL_CHICK STANDARD; PRT; 1045 AA. P47807; Q90573; 01-FEB-1996 (Rel. 33, Created) 01-FEB-1996 (Rel. 33, Last sequence update) 16-OCT-2001 (Rel. 40, Last annotation update) Brush border myosin I (BBM-I) (BBMI) (Myosin I heavy chain) (MIHC).
                DOMAIN
DOMAIN
                                                                           ProDom; PD000355; myosin_head; SMART; SM00015; IQ; 5. SMART; SM000242; wYSC; 1. PROSITE; PS50096; IQ; 3.
                                                                                                                                                                                                                                                                                                  This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                          Pfam; PF00063; myosin_head; 1. pfam; PF00612; IQ; 3. PRINTS; PR00193; MYOSINHEAVY. PTODOm; PD000355; myosin_head;
                                                                                                                                                                                                                                                     EMBL; U04049; AAB38373.1; -. EMBL; X58479; CAA41388.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Garcia A., Coudrier E., Carboni J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TISSUE=Intestine;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE OF 46-1045 FROM N.A., AND SEQUENCE OF 332-343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Cell Motil.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Collins K., Matsudaira P.T.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
MEDLINE=96114119; PubMed=8681398;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Archosauria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gallus gallus (Chicken).
                                               Myosin; Actin-binding; ATP-binding; Calmodulin-binding; Multigene family; 3D-structure.
                                                                                                                                                                                                                         PIR; A33620; A33620
PDB; 1AJI; 17-SEP-9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDLINE=90078325;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 "Recombinant expression of the brush border myosin I heavy chain."; Cell Motil. Cytoskeleton 32:151–161(1995).
 DOMAIN
                                                                                                                                                                                       InterPro; IPR000048; IQ_region.
InterPro; IPR001609; myosin_head.
                                                                                                                                                                                                                                                                                                                                                                                                                               SIMILARITY: CONTAINS 1 MYOSIN-LIKE SIMILARITY: CONTAINS 3 IQ DOMAINS.
                                                                                                                                                                                                                      lAJI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                              TISSUE SPECIFICITY: INTESTINE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SLHLSEMSSVGSKGDFLLVSEHVIELLTK
family;
1
701
723
                                                                                                                                                                                                                        17-SEP-97.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Aves;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PubMed=2687288;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Neognathae;
 684
727
750
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Chordata; Craniata; Vertebrata; Euteleostomi;
Neognathae; Galliformes; Phasianidae; Phasiani
 Ö
Ö
                               NISOYM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Anderson
                                  HEAD-LIKE
                                                                                                                                                                                                                                                                                                                                                                                                                                              GLOBULAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ٠,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         mechanoenzyme
                                                                                                                                                                                                                                                                                                                                                                                                                                                HEAD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Vandekerckhove
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        complex
                                                                                                                                                                                                                                                                                                                                                                                                                                                DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AND
                                                              Repeat;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Phasianinae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            myosins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ç
```

```
Ş
        В
                                                  В
                                                                    Q
                                                                                             В
                                                                                                                ð
                                                                                                                                         В
                                                                                                                                                             Š
                                                                                                                                                                                    밁
                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                9
                                                                                                                                                                                                                                                                         Б
                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                     Вb
                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                        DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local s
Matches 438
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DOMAIN
DOMAIN
DOMAIN
CONFLICT
CONFLICT
CONFLICT
CONFLICT
CONFLICT
CONFLICT
        834
                            839
                                                  774
                                                                        782
                                                                                             714
                                                                                                                   729
                                                                                                                                         654
                                                                                                                                                               669
                                                                                                                                                                                     594
                                                                                                                                                                                                          609
                                                                                                                                                                                                                                534
                                                                                                                                                                                                                                                     551
                                                                                                                                                                                                                                                                            474
                                                                                                                                                                                                                                                                                                 493
                                                                                                                                                                                                                                                                                                                      414
                                                                                                                                                                                                                                                                                                                                            433
                                                                                                                                                                                                                                                                                                                                                                  359
                                                                                                                                                                                                                                                                                                                                                                                                                                   313
                                                                                                                                                                                                                                                                                                                                                                                                              299
                                                                                                                                                                                                                                                                                                                                                                                                                                                        239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ۲
KYREQLTPQQRAMLQAKLCASELFKDKKALYAQSLQQPERGEYLGLTQNRKYQKLQAVAK
              KYCRSISPEWKQOLQQKAVASEIFKGKKDNYPQSVPRLFISTRLG-TEEISPRVLQSLGS
                                          ACTRLSNFTYRRMVQKYLMGLQKNLPPMAVLDRTWPPAPYKFLSDANQELKSTFYRWKCK
                                                        WCCRKRYQLMRKSQILISAWFRGHMQRNRYKQMKRSVLLLQAYARGWKTRRMYRRYFRSD
                                                                                                   FHWRQKFLRVKRSAICIOSWWRGTLGRRKAAKRKWAAQTIRRLIRGFILR------HSP : |:: :: | | | | | |
                                                                                                                                   GGDREGAEVLLAELKFPPEELAYGHTKIFIRSPRTLFDLEKRRQQRVAELATLIQKMFRG
                                                                                                                                                      GRPQDGVAVLVRHLGYKPEEYKMGRTKIFIRFPKTLFATEDSLEVRRQSLATKIQAAWRG
                                                                                                                                                                                           PNDAKQPGREDEVLIRHQVKYLGLMENLRVRRAGFAYRRKYEAFLQRYKSLCPETWPMWA
                                                                                                                                                                                                                                      LKETMCSSMNPIMAQCFDKS--ELSDKKRPETVATQFKMSLLQLVEILRSKEPAYIRCIK
                                                                                                                                                                             PNDTKTAMLFTPDLVLAQVRYLGLMENVRVRRAGYAFRQLYQPFLERYKMLSRKTWPRWT
                                                                                                                                                                                                                         LSQAMWAARHTLLRSLFPEGDPQRPSLKLPPTTGSQFKASVATLMKNLYSKNPNYIRCIK
                                                                                                                                                                                                                                                                     KLNQIFASHKRYESKETLNAKHVTDVSLPLRCFRIHHYAGKVTYNVTGFIEKNNDLLFRD
                                                                                                                                                                                                                                                                                                                MTLKEEQEEYVREGIQWTPVEFFDNSIICDLIENSKVGILAMLDEECLRPGTVNEDTFIT
                                                                                                                                                                                                                                                                                                                               KLEDTVKPHPHELTHKLADQK--TRKSLDRGEFRLLHYAGEVTYSVTGFLDKNNDLLFRN
                                                                                                                                                                                                                                                                                                                                                           WLVNRINTSIQVKPG-----KQRKVMGVLDIYGFEIFQDNGFEQFIINYCNEKLQQIFIL
                                                                                                                                                                                                                                                                                                                                                                         WLVRKINRSLASKDAESPSWRSTTVLGLLDIYGFEVFQHNSFEQFCINYCNEKLQQLFIE 432
                                                                                                                                                                                                                                                                                                                                                                                                       PRELQEISQLIGLDPSTLEQALCSRTVKVRDESVLTALSVSQGYYGRDALAKNIYSRLFD
                                                                                                                                                                                                                                                                                                                                                                                                                                                 FINDDAANFRAMQDAMAIIGFAPAEVTALLEVTAVVLKLGNVKLSSCFQASGMEASSITE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VISNYLLEKSRIVRHVKGERNFHIFYQLLAGGSAQLLQQLKLRPDCSHYGYL-NHEKSVL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FYAETCPAPERGGAVRDRLLQSNPVLEAFGNAKTLRNDNSSRFGKYMDVQFDFKGAPVGG
                                                                                                                                                                                                                                                                                                                                                                                                                            ENOLKYLTRLLGVEGTTLREALTHRKIIAKGEELLSPLNLEQAAYARDALAKAVYSRTFT
                                                                                                                                                                                                                                                                                                                                                                                                                                                              SSINDKSDWKVMRKALSVIDETEDEVEDLLSIVASVLHLGNIH----FAADEDSNAQVTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HILSYLLEKSRVVHQNHGERNFHVFYQLLEGGEEETLRRLGLERNPQSYLYLVKGQCAKV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEATTSLLDAAAVGDLVMLDPL-SEESLLRTLQERFSRGEIYTYIGEVVISVNPYKPLPI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MESALTARDRYGYQDFYLLENFTSEAAFIENLRRRFRENLIYTYIGPYLVSVNPYRDLQI 76
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         YTPEKVEEYHNCNFFAVKPHIYAIADDAYRSLRDRDRDQCILITGESGAGKTEASKLVMS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                al Similarity 41.9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            746
104
574
46
285
287
297
427
427
1045
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ΑĄ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  774
111
596
46
285
297
427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          37.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            119276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             197;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             IO 3.

ATP (POTENTIAL).

ATP (POTENTIAL).

ACTIN.BINDING (POTENTIA E - 2).

C -> S (IN REF 2).

T -> A (IN REF 2).

G -> A (IN REF 2).

CASE -> WERO (IN REF.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 2005.5; DB 1;
Pred. No. 1.2e-119;
7; Mismatches 375;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4C6888CA3FD669D0 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1045
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             35;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                       897
                                                                                                                                                                                                     668
                                                                                                                                                                                                                                                                                                                                       492
                                                                                                             781
                                                                                                                                                        728
                                                                                                                                                                              653
                                                                                                                                                                                                                                               608
                                                                                                                                                                                                                                                                                                                473
                                                                                                                                                                                                                          593
                                                                                                                                                                                                                                                                      533
                                                                                                                                                                                                                                                                                           550
                                                                                                                                                                                                                                                                                                                                                             413
                                                                                                                                                                                                                                                                                                                                                                                                        358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   256
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             17;
```

```
RESULT 9

WYHL_MOUSE
ID MYHLLAN
AC 088329
DT 16-OCT
DT 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          20
Query Match
Best Local Similarity
                                                                            NON_TER
SEQUENCE
                                                                                                                        DOMAIN
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entitles requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Skowion J.F., Mooseker M.S.;

"Cloning and characterization of mouse brush border myosin-I in and embryonic intestine."

J. Exp. Zool. 283:242-257(1999).

-I- FUNCTION: INVOLVED IN DIRECTING THE MOVEMENT OF ORGANELLES ACTIN FILAMENTS (POTENTIAL).
                                                                                                                                                                                                                                                                        Myosin; Actin-binding; ATP-binding; Calmodulin-binding; Multigene family.
                                                                                                                                                                                                                                                                                                                   SMART; SM00015; IQ; 3.
SMART; SM00242; MYSc; 1.
PROSITE; PS50096; IQ; 2.
                                                                                                                                                                                                                                                                                                                                                                                           pfam; PF00063; myosin_head; 1.
Pfam; PF00612; IQ; 3.
PRINTS; PR00193; MYOSINHEAVY.
ProDom; PD000355; myosin_head;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     InterPro; IPR000048; IQ_region.
InterPro; IPR001609; myosin_head
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MGD; MGI:1338019; Myhl.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    HSSP; P08799;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EMBL; AF009960; AAC28397.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mus musculus (Mouse).
Eukaryota; Metazoa; C
Mammalia; Eutheria; F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        16-OCT-2001 (Rel. 40, Created)
16-OCT-2001 (Rel. 40, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation update)
Brush border myosin I (BBM-I) (BBMI) (Myosin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          O88329;
16-OCT-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A. MEDLINE=99132700; PubMed=9933937;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (Fragment).
MYHL OR BBM-I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1014
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1010
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MYHL_MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     954
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                868
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SIMILARITY: CONTAINS 1 MYOSIN-LIKE GLOBULAR HEAD SIMILARITY: CONTAINS 3 IQ DOMAINS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GLLALHLKETSTAGGKGDLLLVSPHLIELVTRLHQTLMDATAQALPLSIADQFSTRFPKG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DKLVMAEAVQKVNRANGKTVPRLLLLTTEHLVLADPKAAQPKMVLSLCDIQGASVSRFSD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EPIQYAVPVVKYDRKGYKPRPRQLLLTPSAVVIVED--AKVKQRIDYANLTGISVSSLSD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DVAVTVVESAKGGGDVPVCKKRGSH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PGRDGIIDFT-SGSELLITKAKNGH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SLFVLHVQREDNK-QKGDVVLQSDHVIETLTK---TALSAD-RVNNINI-NQGSITFAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1MND.
                                                                            AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                         myosin_head;
                                                                                                                           681
719
742
772
772
108
593
  36.8%;
44.8%;
                                                                       104421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Chordata; Craniata; Vertebrata; F
Rodentia; Sciurognathi; Muridae;
                                                                     MW,
  Score
Pred.
                                                                                                                IQ 3.
ATP (BY SIMILA
ACTIN-BINDING
                                                                                                                                                                                        MYOSIN
IQ 1.
IQ 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRT;
                                                                       F7EF392D55837341 CRC64;
                                                                                                                                                                      ωΝ⊢
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1033
                                                                                                                                               (BY SIMILARITY
1987; DB 1;
No. 1.4e-118;
                                                                                                                                                                                                                                         HEAD-LIKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          brush border myosin-I in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PΑ
                                                                                                                   (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   I heavy chain) (MIHC)
                 Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Murinae;
                       909;
                                                                                                                                                                                                                                                                                       Repeat;
                                                                                                                             ,1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1013
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1009
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     953
```

Euteleostomi;
; Murinae; Rat

Rattus

DOMAIN

ALONG

```
RESULT 10
                                                                                                                                                                                   QΥ
                                                                                                                                                                                                              망
                                                                                                                                                                                                                                   õ
                                                                                                                                                                                                                                                                  Ъ
                                                                                                                                                                                                                                                                                        δÃ
                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                             Qy
                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                 Q
                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    γ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
  3 5 E E
                                                                                                          B
                                                                                                                                Ş
                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
MYHL_RAT
Q62774;
16-OCT-2001
16-OCT-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       127
                                                                                                          898
                                                                                                                                    905
                                                                                                                                                            839
                                                                                                                                                                                                                                                                    719
                                                                                                                                                                                                                                                                                             737
                                                                                                                                                                                                                                                                                                                        659
                                                                                                                                                                                                                                                                                                                                                 677
                                                                                                                                                                                                                                                                                                                                                                            599
                                                                                                                                                                                                                                                                                                                                                                                                     617
                                                                                                                                                                                                                                                                                                                                                                                                                               539
                                                                                                                                                                                                                                                                                                                                                                                                                                                        559
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                147
                                                                                                                                                                                       847
                                                                                                                                                                                                                 779
                                                                                                                                                                                                                                          789
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8
                                                                                                                                                                                                                                                                                                                                                                                                                                            MNPIMAQCEDKSELSDK--KRPETVATQEKMSLLQLVEILRSKEPAYIRCIKPNDAKQPG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ASKDAESPSWRSTTVLGLLDIYGFEVFQHNSFEQFCINYCNEKLQQLFIELTLKSEQEEY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AVQHAMSVIGFSEEEIRQVLEVTALVLKLGNVKLTDEFQANGIPASGICDGKGIQEIGEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VMRKALSVIDFTEDEVEDILSIVASVLHLGNIHFAADEDSN----AQVTTENQLKYLTRL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     QVNSVKEQLLQSNPVLEAFGNAKTIRNNNSSRFGKYMDIEFDFKGSPLGGVITNYLLEKS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RGGAVRDRLLQSNPVLEAFGNAKTLRNDNSSRFGKYMDVQFDFKGAPVGGHILSYLLEKS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GVSFYEVPPHLFAVADTVYRALRTERRDQAVMISGESGAGKTEATKRLLQFYAETCPAPE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VGVQDFVLLENFTSEAAFIENLRRRFRENLIYTYIGPVLVSVNPYRDLQIYSRQHMERYR
                                                                                                          TVKKVNR
                                                                                                                                                                                                                                                                                                                    KVLGSLTLSSEELAYGKTKIFIRSPKTLFYLEEQRRLRLQQLATLIQKVYRGWRCRTHYQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KREGIPWTKVEYFDNGIICNLIEHSQRGILAMLDEECLRPGVVSDSTFLAKLNQLFSKHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EAEGIAWEPVQYFNNKIICDLVEEKFKGIISILDEECLRPGEATDLTFLEKLEDTVKPHP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KVGTGEKKK-----VMGVLDIYGFEILEDNSFEQFVLNYCNERLQQVFIELTLKEEQEEY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MGLNSTELERALCSRTMETGKEKVVTVLNVTQAQYARDALAKNIYSRLFDWIVKRINESI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RVVKQLKGERNFHIFYQLLAGADAQLLKALKLEEDTSVYGYL-NGEVSKVNGMDDASNFR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RVVHQNHGERNFHVFYQLLEGGEEETLRRLGLERNPQSYLYLVKGQCAKVSSINDKSDWK 266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DYTFYELKPHIYALANVAYQSLKDRDRDQCILITGESGAGKTXXXKLVMSYVAAVCGKGE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VGVEDLILLEPL-DEESLIKNLQLRYENKEIYTYIGNVVISMNPYEQLPIYGPEFIAKYR
                                                                                                                                  PVVKYDR
                                                                                                                                                                                                                             FLDHVRASFLINLRRQLP-RNVLDTSWPTPP-PALREASELLRELCMKNMVWKYCRSISP
: |||||: |: |: |: |: |: |: ||
                                                                                                                                                                                                                                                                  QMRKSQILISAWFRGNKQKKHYGKIRSSVLLIQAFVRGWRARKNYRKYFRSGAALTLANF
                                                                                                                                                                                                                                                                                                                                                                                       RFDEVLIRHQVKYLGLMENLRVRRAGFAYRRKYEAFLQRYKSLCPETWPMWAGRPQDGVA 676
                                                                                                                                                                                                                                                                                                                                                                                                                              QHPLLKSLFPEGNPKEASLKRPPTAGTQFKNSVAVLMKNLYSKNPNYIRCIKPNDQQQKG
                                                                                                                                                            KQVQTLREKLCASELFKGKKASYPQSVPIPFRGDYIGLQG-NPKLQRLKGREEGPVLVAD
                                                                                                                                                                                    EWKQQLQQKAVASEIFKGKKDNYPQSVPRLFISTRLGTEEISPRVLQSLGSE--PIQYAV 904
                                                                                                                                                                                                               IYQSMAQKFLLNLKKNLPSTKVLDNTWPAAPYRCFNTANQELQRLFYQWKCKKFRDQLSP
                                                                                                                                                                                                                                                                                           RVKRSAICIQSWWRGTLGRRKAAKRKWAAQTIRRLIRGFILRHSPRCPENA-----F
                                                                                                                                                                                                                                                                                                                                              VLVRHLGYKPEEYKMGRTKIFIRFPKTLFATEDSLEVRRQSLATKIQAAWRGFHWRQKFL 736
                                                                                                                                                                                                                                                                                                                                                                          RFTSEMVMVQARYLGLLENVRVRRAGYAFRQGYKPFLERYRLLSRSTWPRWNGDDREGVE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  HY--ESKVSQNAQRQYDRTMGLSCFRISHYAGKVTYNVTGFIDKNNDLLFRDLSQTMWKA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 406;
(Rel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                          904
                                                                                                                                  911
                                         STANDARD;
40,
 Last sequence update)
               Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 177;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                         842
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 292;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                       616
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 245
                                                                                                                                                            897
                                                                                                                                                                                                                                                                  778
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 12;
                                                                                        δõ
                                                                                                                                         ρ
                                                                                                                                                                         DЬ
                                                                                                                                                                                               Qγ
                                                                                                                                                                                                                                                                                                                                   밁
                                     Š
                                                                Вb
                                                                                                                     дb
                                                                                                                                                                                                                          B
                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                             Query Match
Best Local S
Matches 388
                                                                                                                                                                                                                                                                                                                                              DOMAIN
DOMAIN
NON_TER
                                                                                                                                                                                                                                                                                                                                                                                                                                                ProDom; PDVVVV
SMART; SM00015; IQ; 3.
SMART; SM00242; MYSC; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entitles requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STRAIN=Sprague-Dawley; TISSUE=Liver, MEDLINE=95298044; PubMed=7779104;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               16-OCT-2001 (Rel. 40, Last annotation update)
Brush border myosin I (BBM-I) (BBMI) (Myosin I heavy chain) (MIHC)
                                                                                                                                                                                                                                                                                                                                   SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                      DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRINTS; PR00193; MYOSINHEAVY. ProDom; PD000355; myosin_head;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pfam; PF00063; myosin_head; 1. Pfam; PF00612; IQ; 3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               InterPro; IPR000048; IQ_region.
InterPro; IPR001609; myosin_head.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EMBL; U25148; AAA89132.1; -. HSSP; P08799; IMND.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACTIN FILAMENTS (POTENTIAL).
-!- SIMILARITY: CONTAINS 1 MYOSIN-LIKE GLOBULAR HEAD
-!- SIMILARITY: CONTAINS 3 IQ DOMAINS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NCBI_TaxID=10116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Rattus norvegicus (Rat).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MYHL OR BBMI.
                                                                                                                                                                                                                                                                                                                                                                                                     DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                NON_TER
                                                                                                                                                                                                                                                                                                                                                                                                                             Multigene
                                                                                                                                                                                                                                                                                                                                                                                                                                          Myosin;
               239
                                       268
                                                                  180
                                                                                                                     120
                                                                                                                                               148
                                                                                                                                                                         60
                                                                                                                                                                                                88
                                                                                                                                                                                                                                                     28
                                                                                                                                                                                                                            μ.
                                                                                                                                                                                                                                       GVQDFVLLENFTSEAAFIENLRRRFRENLIYTYIGPVLVSVNPYRDLQIYSRQHMERYRG
                                                                                                                              GGAVRDRLLQSNPVLEAFGNAKTLRNDNSSRFGKYMDVQFDFKGAPVGGHILSYLLEKSR 207
                                                                                                                                                                                                                            GVEDLILLEPL-DEESLIKNLQLRYEKKEIYTYIGNVVISMNPYQQLPIYGPEFIAKYRD
                            VNSVKEQLLQSNPVLEAFGNAKTIRNDNSSRFGKYMDIEFDFKGSPLGGVITNYLLEKSR
                                                                                                                                                                        VSFYEVPPHLFAVADTVYRALRTERRDQAVMISGESGAGKTEATKRLLQFYAETCPAPER 147
             VQNAMAVIGFSEEEIRQVLEVTALVLKLGNVKLAGEFQANGLPASGVCDGKGIQEIGEMM
                                                                                                                                                                                                                                                                                                                                                                                                                                         Actin-binding;
                                                                                                                                                                                                                                                                                             Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                             family.
                                                                                                                                                                                                                                                                                                                                   842
                                                                                                                                                                                                                                                                                                                                                <1
689
713
735
842
                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                   AΑ;
                                                                                                                                                                                                                                                                                                                                                673
712
733
764
842
                                                                                                                                                                                                                                                                                                                                  97210 MW; DDAFDCB66308316B CRC64;
                                                                                                                                                                                                                                                                                           35.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                        ATP-binding; Calmodulin-binding;
                                                                                                                                                                                                                                                                               165;
                                                                                                                                                                                                                                                                                                                                                           MYOSIN
IQ 1.
IQ 2.
IQ 3.
                                                                                                                                                                                                                                                                                             Pred. No.
                                                                                                                                                                                                                                                                                                        Score 1932.5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Craniata; Vertebrata; Sciurognathi; Muridae;
                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                    HEAD-LIKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              and Testis;
                                                                                                                                                                                                                                                                                             3.7e-115;
                                                                                                                                                                                                                                                                                                        DB 1;
```

Indels Length

29;

Gaps

10;

87

59

119

267

Repeat;

```
В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            õ
MEDLIND-2019606; PubMed-10731132;
Adams M.D., Celniker S.E., Holt R.A., Evans C.A., Gocayne J.D.,
Amanatides P.G., Scherer S.E., Li P.W., Hoskins R.A., Galle R.F.,
George R.A., Lewis S.E., Richards S., Ashburner M., Henderson S.N.,
Sutton G.G., Wortman J.R., Yandell M.D., Zhang Q., Chen L.X.,
Brandon R.C., Rogers Y.-H.C., Blazej R.G., Champe M., Pfeiffer B.D.,
Wan K.H., Doyle C., Baxter E.G., Helt G., Nelson C.R., Miklos G.L.G.
                                                                                                                             STRAIN-Berkeley;
                                                                                                                                                                     Morgan N.S., Skovronsky D.M., Artavanis-Tsakonas S., Mooseker M.S., "The molecular cloning and characterization of Drosophila melanogas myosin-IA and myosin-IB.";
J., Mol. Biol. 239:347-356(1994).
                                                                                                                                                                                                                                         TISSUE-Embryo;
MEDLINE-94260541; PubMed-8201616;
                                                                                                                                                                                                                                                                                                                 Insecta; Metazoa; Arthropoda; Mandibulata; Pancrustacea; Insecta; Pterygota; Neoptera; Endopterygota; Diptera; Brach Muscomorpha; Ephydroidea; Drosophilidae; Drosophila. NCBI_TaxID=7227;
                                                                                                                                                                                                                                                                                                                                                                   16-OCT-2001 (Rel. 40, Created)
16-OCT-2001 (Rel. 40, Last sequence
15-JUN-2002 (Rel. 41, Last annotatio
Myosin IA (MIA) (Brush border myosin
MYO31DF OR CG7438.
Drosophila melanogaster (Fruit fly).
Eukaryota; Metazoa; Arthropoda; Mand
                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.,
                                                                                                                                               SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MYIA_DROME
Q23978;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           16-OCT-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  790
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         474
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            QVQTLREKLCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WKQQLQQKAVA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     YQSITQKFLLNLKKNLPSTKVLDNTWPAAPYRCFNTANQELQHLFYQWKCKKYRDQLSPK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VKRSAICIQSWWRGTLGRRKAAKRKWAAQTIRRLIRGF-----ILRHSPRCPENAFF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VLGSLILSSEELAYGRTKIFIRSPKTLFYLEEQRRLRLQQLATLIQKVYRGWRCRTHYQQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FLTHKLADOKTRKSLDR----GEFRLLHYAGEVTYSVTGFLDKNNDLLFRNLKETMCSSM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MRKSQILLSAWFRGNKQKKHYGKIRSSVLLIQAFVRGWKARKNYRKYFRSGARITLANFI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LVRHLGYKPEEYKMGRTKIFIREPKTLFATEDSLEVRRQSLATKIQAAWRGFHWRQKFLR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FTSELVMVQARYLGLLENVRVRRAGYAFRQAYKPFLERYRLLSRSTWPRWNGEDREGVEK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FDEVLIRHOVKYLGLMENLRVRRAGFAYRRKYEAFLORYKSLCPETWPMWAGRPODGVAV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NPIMAQCEDKS--ELSDKKRPETVATQEKMSLLQLVEILRSKEPAYIRCIKPNDAKQPGR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Y--ESKVTQNAQRQYDRTMGLSCFRICHYAGKVTYDVTSFIDKNNDLLFRDLSQTMWKAQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REGIPWTKVEYFDNGIICDLIEHSQRGILAMLDEECLRPGVVSDTTFLAKLNQLFSKHSH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AEGIAWEPVQYFNNKIICDLVEEKFKGIISILDEECLRPGEATDLTELEKLEDTVKPHPH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VGTGE-----KRKVMGVLDIYGFEILEDNSFEQFVINYCNEKLQQVFIELTLKEEQEEYK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SKDAESPSWRSTTVLGLLDIYGFEVFQHNSFEQFCINYCNEKLQQLFIELTLKSEQEEYE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GLNSVELEKALSSRTMETGKEKVVTVLNVIQAQYARDALAKNIYSRLFDWIVNRINESIK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GVEGTTLREALTHRKIIAKGEELLSPLNLEQAAYARDALAKAVYSRTETWLVRKINRSLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                   1. 40, Last sequence up
L. 41, Last annotation
(Brush border myosin ]
                                                                                                                                                                                                                                                                                  AND DEVELOPMENTAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                       update)
                                                                                                                                                                                                                                                                                                                                                                                                                   IA) (BBMIA).
                                                                                                                                                                                                                                                                                                                                                                                                                                     update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AA
                                                                                                                                                                                                                                                                                                                                           Brachycera;
                                                                                                                                                                                                        melanogaster
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           651
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             591
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   383
```

뮍 5 밁 δõ Ъ ο_γ

```
RA
Beeson K.Y., Benos P.V., Bernan B.P., Bhandari D., Bolshakov S.,
RA
Borkova D., Botchan M.R., Bouck J., Brokstein P., Brottier P.,
RA Burtis K.C., Busam D.A., Butler H., Cadieu E., Center A., Chandra I.,
RA Cherry J.M., Cawley S., Dahlke C., Davenport L.B., Davies P.,
RA Cherry J.M., Cawley S., Dahlke C., Davenport L.B., Davies R.
RA Cherry J.M., Cawley S., Dahlke C., Davenport L.B., Davies R.
RA Cherry J.M., Cawley S., Dahlke C., Davenport L.B., Davies R.
RA Cherry J.M., Cawley S., Dahlke C., Davenport L.B., Davies R.
RA Cherry J.M., Cawley S., Dahlke C., Davenport L.B., Davies R.
RA Cherry J.M., Cawley S., Dahlke C., Davenport L.B., Davies R.
RA Cherry J.M., Cawley S., Dahlke C., Davenport L.B., Davies R.
RA Dodson K., Doup L.E., Downes M., Dugan-Rocha S., Dunkov B.C., Dunn P.
RA Dodson K., Doup L.E., Downes M., Dugan-Rocha S., Dunkov B.C., Dunn P.
RA Glodek A., Gong F., Gorrell J.H., Gu Z., Guan P., Harris M.,
RA Harris N.L., Harvey D., Heiman T.J., Herrandez J.R., Houck J.,
RA Harris N.L., Harvey D., Heiman T.J., Herrandez J.R., Houck J.,
RA Hostin D., Houston K.A., Howland T.J., Wei M.-H., Ibeywam C.,
RA Kimmel B.E., Kodira C.D., Kraft C., Krawitz S., Kulp D., Lai Z.,
RA Kimmel B.E., Kodira C.D., Kraft C., Krawitz S., Kulp D., Lai Z.,
RA Merkulov G., Milshina N.Y., Wobarry C., Morris J., Moshrefi A.,
RA Melson D.R., Nelson K.A., Nixon K., Nusskern D.R., Pacleb J.M.,
RA Palazzolo M., Pittman G.S., Pan S., Pollard J., Puri V., Reese M.G.,
RA Mang Z.-Y., Wassarman D.A., Weinstock G.M., Weissenbach J.,
RA Wang Z.-Y., Wassarman D.A., Weinstock G.M., Weissenbach J.,
RA Wang Z.-Y., Wassarman D.A., Weinstock G.M., Weissenbach J.,
RA Wang Z.-Y., Wassarman D.A., Weinstock G.M., Weissenbach J.,
RA Yein, K.M., Woodage T., Worley K.C., Wu D., Yang S., Yao Q.A.,
RA Zheng X.H., Zhong F.N., Zhong W., Zhou X., Zhu X., Smith H.O.,
RA Zheng X.H., Wang X., Rubin G.M., Venter J., Sin th H.O.,
RA Zheng X.H., Wang X., Rubin G.M., Venter J.C.,
RA Zheng X.H., Wang X., Sidence P., Sidence P., Sidence P., Sidence P., Sidence P., 
MEDLINE=96069904; PubMed=7589814;
                                                                                                       FUNCTION,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Abril J.F., Agbayani A., An n. ..
Ballew R.M., Basu A., Baxendale
Beeson K.Y., Benos P.V., Bernan
Beeson K.Y., Benos P.V., Bernan
                                                                                                  SUBCELLULAR LOCATION,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        An H.-J., Andrews-Pfannkoch C.,
                                                                                        TISSUE SPECIFICITY,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       J., Bayraktaroglu L., Beasley
                                                                                             AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Fleischmann
                                                                                        DEVELOPMENTAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Reese M.G.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Baldwin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Dunn
                                                                                                                                                                                                                                                                                                                      H.O.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   D.,
```

Morgan N.S., Heintzelman M.B., Mooseker M.S., "Characterization of myosin-IA and myosin-IB, myosins associated with the Drosophila brush border cytoskeleton cytoskeleton.";

BIOL. 172:51-71(1995).

FUNCTION: INVOLVED IN DIRECTING THE MOVEMENT OF ORGANELLES ACTIN FILAMENTS (BY SIMILARITY).

SUBCELLULAR LOCATION: CYTOPLASMIC. PROTEIN SHIFTS FROM THE BASOLATERAL TO APICAL DOMAIN IN ENTEROCYTES AND FOLLICLE

TISSUE SPECIFICITY: IN THE EMBRYO, EXPRESSED IN GASTRIC CAECAE, MIDGUT CELLS OF THE PROVENTRICULUS, AND IN THE MID AND HINDGUT. I THE LARVAL GUT BRUSH BORDER, EXPRESSION IS IN THE TERMINAL WEB DOMAIN. IN THE ADULT GUT BRUSH BORDER, EXPRESSION REMAINS IN THE EMBR DOMAIN AND HAS ALSO MOVED INTO THE MICROVILLI. ALSO EXPRESSED AT LOW LEVELS IN FOLLICLE CELLS DURING OCCENESIS.

DEVELOPMENTAL STAGE: EXPRESSED BOTH MATERNALLY AND ZYGOTICALLY THROUGHOUT DEVELOPMENT TO ADULTHOOD WITH HIGHEST LEVELS AT THE EN OF LARVAL DEVELOPMENT. EXPRESSION IN EMBRYOGENESIS IS CORRELATED WITH THE FORMATION OF A BRUSH BORDER WITHIN THE ALIMENTARY EXPRESSED Ï

SIMILARITY: SIMILARITY: CONTAINS 2 1 MYOSIN-LIKE GLOBULAR HEAD DOMAIN. IQ DOMAINS.

EMBL; EMBL; HSSP; entities or send a FlyBase; FBgn0011673; Myo31DF use by non-profit institutions as long modified and this statement is not removed the s SWISS-PROT entry is copyright. It ween the Swiss Institute of Bioinformatics Institute. P08799; U07595; AAA19590.1; AE003628; an requires equires a license agreement (seemail to license@isb-sib.ch). AAF52966.1; ght. It is produced through a collaboration Bioinformatics and the EMBL outstation titute. There are no restrictions on it (See as http://www.isb-Usage its content -sib.ch/announce/ for collaboration -5 no

InterPro; IPR000048; IPR001609;

```
õ
                         8
                                            δ
                                                                            B
                                                                                                   Qy
                                                                                                                              밁
                                                                                                                                                     δÃ
                                                                                                                                                                                 В
                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                   Вþ
                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                        Ъ
                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                              B
                                                                                                                                                                                                                                                                                                                                                                                                                    Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                               ф
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    д
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DOMAIN
NP_BIND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SMART; SM00015; IQ; 1.
SMART; SM00242; MYSC; 1.
PROSITE; PS50096; IQ; 1.
Myosin; ATP-binding; Actin-binding; Calmodulin-binding;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRINTS; PR00193; MYOSINHEAVY. ProDom; PD000355; myosin_head;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Multigene
                                                                                                                                593
                                                                                                                                                                                   537
                                                                                                                                                                                                                                      479
                                                                                                                                                                                                                                                              503
                                                                                                                                                                                                                                                                                          419
                                                                                                                                                                                                                                                                                                                  443
                                                                                                                                                                                                                                                                                                                                            360
                                                                                                                                                                                                                                                                                                                                                                      383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      184
 794
                                                                                                                                                                                                                                                                                                                                                                                                300
                                                                                                                                                                                                                                                                                                                                                                                                                          323
                                                                                                                                                                                                                                                                                                                                                                                                                                                 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      28 GVQDFVLLENFTSEAAFIENLRRRFRENLIYTYIGPVLVSVNPYRDLQIYSRQHMERYRG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GVAVLVRHLGYKPEEYKMGRTKIFIRFPKTLFATEDSLEVRRQSLATKIQAAWRGFHWRQ 733
                                                                                                                                          PGRFDEVLIRHOVKYLGLMENLRVRRAGFAYRKYEAFLQRYKSLCPETWPMW-AGRPQD
                                                                                                                                                                                                           MCSSMNPIMAQCFDKSELSDKKRPETVATQFKMSLLQLVEILRSKEPAYIRCIKPNDAKQ
                                                                                                                                                                                                                                                              HFLTHKLADQKTRKSL-DRGEFRLLHYAGEVTYSVTGFLDKNNDLLFR-----
                                                                                                                                                                                                                                                                                        QREGIEWTNIEYFNNKIICDLVEQPHKGIIAIMDEACLSVGKVTDDTLLGAMDKNLSKHP
                                                                                                                                                                                                                                                                                                    EAEGIAWEPVQYFNNKITCDLVEEKFKGIISILDEECLRPGEATDLTFLEKLEDTVKPHP
                                                                                                                                                                                                                                                                                                                                         LFRGSKTQA-RFNSVIGVLDIYGFEIFDSNSFEQFCINYCNEKLQQLFIELVLKQEQEEY
                                                                                                                                                                                                                                                                                                                                                        ASKDAESPSWRSTTVLGLLDIYGFEVFQHNSFEQFCINYCNEKLQQLFIELTLKSEQEEY
                                                                                                                                                                                                                                                                                                                                                                                                            LGVEGTTLREALTHRKIIAKGEELLSPLNLEQAAYARDALAKAYYSRTFTWLYRKINRSL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LEKSRVVHQNHGERNFHVFYQLLEGGEEETLRRLGLERNPQSYLYLVKGQCAKVSSINDK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NEIER----VKNVLIQSNAILETFGNAKTNRNDNSSRFGKYMDIEFDYKADPVGGIITNYL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RELFENAPHLFAIADSAYRVLKQRQQDTCILISGESGAGKTEASKIIMKYIAAVTNAQGQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GVQDEVLLDQVSME-KEMDNLRKREQNGSIYTYIGEVCVSMNPYRQMNIYGPETIRKYKG
RASFLLNLRRQL--PRNVLD----TSWPTPPPALREASELLR---ELCMKNMV-WKYCRS
                                                                                                                             STVFDEERVEHQVRYLGLLENLRVRRAGFVHRQRYDKFLLRYKMISQYTWPNFRAGSDRD
                                                                                                                                                                                  NLSEMWPEGAQDIKKT----TKRPLTAGTLFQRSMADLVVTLLKKEPFYVRCIKPNDLKS
                                                                                                                                                                                                                                                                                                                                                                                             LQVTETELSTALTKRVIAAGGNVMQKDHNATQAEYGKDALAKAIYDRLFTWIISRINRAI
                                                                                                                                                                                                                                                                                                                                                                                                                                                 SDYKGTCNAFKTLGFSTDEVQTIWRTIAAVLHLGNVEFQTIED-ELVISNKQHLKSTAKL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SDWKVMRKALSVIDFTEDEVEDLLSIVASVLHLGNIHFAADEDSNAQVTTENQLKYLTRL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LEKSRVVQQQPGERNFHSFYQLLRGANDNELRQYELQKETGKYHYLNQG----SMDILTEK
                                                                                                                                                                                                                                    HYTSRQL--KPTDKELKHREDFRITHYAGDVIYNINGFIEKNKDTLYQDFKRLLHNSKDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PF00063; myosin_head; PF00612; IQ; 2.
                                                  KFLRVKRSAICIQSWWRGTLGRRKAAKRKWAAQTIRRLIRGFILRHSPRCPENAFFLDHV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 426;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -ERGGAVRDRLLQSNPVLEAFGNAKTLRNDNSSRFGKYMDVQFDFKGAPVGGHILSYL 202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   695
716
100
567
1011
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 694
721
736
107
589
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             33.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   117094
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 169;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ME.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 1800.5; DB 1
Pred. No. 1.2e-106;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IQ 1.
IQ 2.
ATP (BY SIMILARITY)
                        -----AAITIVRAYKAYKLR------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MYOSIN HEAD-LIKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACTIN-BINDING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     31206C065B5D5DFA CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 341;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (BY SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels 139;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 1011;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Repeat;
                                                                                                                                                                                                                                                              - NLKET
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                           614
                                                                                                                                                                                                                                                                                          478
                                                                                                                                                                                                                                                                                                                                           418
                                                                                                                                                                                                                                                                                                                                                                    442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       87
843
                                                                                                                              652
                                                                                                                                                                                  592
                                                                                                                                                                                                                                                              554
                                                                                                                                                                                                                                                                                                                                                                                              359
                                                                                                                                                                                                                                                                                                                                                                                                                       382
                                                                                                                                                                                                                                                                                                                                                                                                                                                 299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 29
```

```
RESULT 12

MYSE_DICDI
ID MYSE_I
AC 003472

DT 01-FEE
DT 01-FE
DT 01-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                QY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DЬ
                        Pfam; PF00063; myosin_head; 1.
Pfam; PF00612; IQ; 2.
Pfam; PF00612; IQ; 2.
PRINTS; PR00193; MYOSINHEAVY.
ProDom; PD000355; myosin_head; 1
SMART; SM00015; IQ; 1.
SMART; SM000142; MYSC; 1.
PROSITE; PS50096; IQ; 2.
MYOSIN; Actin-binding; ATP-bindi
Multigene family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MYSE_DICDI
Q03479;
                                                                                                                                                                                                                                                                                     PIR; $33760; $33760.
HSSP; P08799; IMND.
DictyDb; DD01049; myoE.
InterPro; IPR000048; IQ_region.
InterPro; IPR001609; myosin_head.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBI outstation the European Bioinformatics Institute. There are no restrictions on it use by non-profit institutions as long as its content is in no was modified and this statement is not removed. Usage by and for commercial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Urrutia R., Jung G., Hammer J.A. III; "The Dictyostellum myosin IE heavy chain gene encodes isoform that lacks sequences corresponding to the acti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Dictyostelium discoideum (Slime mold). Eukaryota; Mycetozoa; Dictyosteliida; Dictyostelium.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   01-FEB-1994 (Rel. 28, Created)
01-FEB-1994 (Rel. 28, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
Myosin I E heavy chain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Biochim. Biophys. Acta 1173:225-229(1993).
-i- FUNCTION: MYOSIN IS A PROTEIN THAT BINDS
ACTIVITY THAT IS ACTIVATED BY ACTIN. MAY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Mycetozoa; NCBI_TaxID=44689;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MYOE OR DMIE.
                                                                                                                                                                                                                                                                                                                                                                                                                                               EMBL; L06805; AAA33201.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              -i- SUBUNIT: MYOSIN I HEAVY CHAIN IS SINGLE-HEADED. DIM
AND A LIGHT CHAIN. INABILITY TO SELF-ASSEMBLE INTO
-i- SIMILARITY: CONTAINS 1 MYOSIN-LIKE GLOBULAR HEAD DO
-i- SIMILARITY: CONTAINS 2 IQ DOMAINS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE=93277957; PubMed=8504170;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         in the tail.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     945
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               845
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        952 KKYHDLTGTELRVNVTTNISCRLDGKARIITVEAASNVEVPNFRPKEGNIIFEVP 1006
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 791
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEMBRANES RELATIVE TO ACTIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   --SYVQELANKLRKAKQMRDYGKSIQWPQPPLAGRKVEAKLHRMFDFWRANMILHKYPRS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LTSISVSPGRDQLIVFH----SSKNK-DLVFSLESEY----TPLKEDRIGEVVGIVC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LTGISVSSLSDSLFVLHVQREDNKQKGDVV--LQSDHVIETLTKTALSADRVN-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            HPADGETFQQVLFSSFVKKFNHFN-KQANRAFIVSDSTIHKLDGIKNKFKDMKRTIKIRE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -----EPIQYAVPVVKYDRKGYKPRPRQLLLTPSAVVIVEDAK-----VKQRIDYAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ISPEWKQQLQQKAVASEIFKGKKDNYPQSVPRLFISTRLGTEEISPRVLQSLGS-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ·EW-PQLRLQIIAATALAGRRPYWGQA---RRWVGDYLANSQENSGYEAYNGSIKNIRN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NININGGSITFAGGPGRDGIIDFTSGSELLITKAKNGHLAVVAP
   693
                                                    ATP-binding; Calmodulin-binding;
   MYOSIN HEAD-LIKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TO ACTIN & HAS PLAY A ROLE IN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     actin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DIMER OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             a truncated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILAMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           a collaboration -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATPASE
MOVING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1039
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       944
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   790
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            903
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         897
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             way
```

```
Š
                        밁
                                          Q
                                                                   먕
                                                                                      Ş
                                                                                                              В
                                                                                                                                   Ş
                                                                                                                                                          밁
                                                                                                                                                                             õ
                                                                                                                                                                                                     В
                                                                                                                                                                                                                         Ωy
                                                                                                                                                                                                                                                망
                                                                                                                                                                                                                                                                     õ
                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                á
                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                  õ
                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SPTETT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query
Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DOMAIN
DOMAIN
DOMAIN
DOMAIN
DOMAIN
   888
                         792
                                                                     758
                                                                                         791
                                                                                                              711
                                                                                                                                    732
                                                                                                                                                          651
                                                                                                                                                                                672
                                                                                                                                                                                                      591
                                                                                                                                                                                                                           612
                                                                                                                                                                                                                                                 531
                                                                                                                                                                                                                                                                      553
                                                                                                                                                                                                                                                                                            476
                                                                                                                                                                                                                                                                                                                 495
                                                                                                                                                                                                                                                                                                                                       420
                                                                                                                                                                                                                                                                                                                                                             435
                                                                                                                                                                                                                                                                                                                                                                                 367
                                                                                                                                                                                                                                                                                                                                                                                                      375
                                                                                                                                                                                                                                                                                                                                                                                                                                                 319
                                                                                                                                                                                                                                                                                                                                                                                                                            307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1.87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         28 GVQDFVLLENETSEAAFIENLRRRFRENLIYTYIGPVLVSVNPYRDLQIYSRQHMERYRG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            / Match
Local Similarity
nes 416; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9
SPRVLQSLGSEPIQYAVPVVKYDRKGYKPRPRQLLLTPSAVVIVEDAKVKQR--
                   QNHMRQKVMAYDIFHGKKKWDFRRHFDADYLEKPWNPNQQKYVLAMQNLF---
                                                                                                                              ROKFLRVKRSAICIQSWWRGTLGRRKAAKRKWAAQTIRRLIRGF-ILRHSPRCPENAFFL
                                                                                                                                                                    SSMQSSSDPLVQGLEPPTRPEDSKKRPETAGSQFRNAMNALITTLLACSPHYVRCIKSND
                                                                                                                                                                                                                                                                                                                                               LKSEQEEYEAEGIAWEPVQYFNNKIICDLVEEKFKGIISILDEECLRPGEATDLTFLEKL
                                             KQQLQQKAVASETFKGKK---
                                                                                     DHVRASFLLNLRRQLPRNVLDTSWPTPPPALREASELLRELCMKNMVWKYCRSISP--EW
                                                                                                                                                      KQATELILQQHNIDKEEIRMGKTKVFIRIPRTLFYFEEKRELEMPRIVTLIQKTWRGYRA
                                                                                                                                                                                                  NKQAGVIDEDRDRHQVRYLGLLENVRVRRAGFAGRIEYTRFYNRYKMLCKKTWPSFNGTA
                                                                                                                                                                                                              AKQPGRFDEVLIRHQVKYLGLMENLRVRRAGFAYRRKYEAFLQRYKSLCPETWPMWAGRP
                                                                                                                                                                                                                                                         CKQFEKNPHLQSYVVS-----KDRSNGDTCFRLKHYAGDVTYDVRGFLDKNKDTLFGDLI
                                                                                                                                                                                                                                                                                                                                  VRKINRSLASKDAESPSWRSTTVLGLLDIYGFEVFQHNSFEQFCINYCNEKLQQLFIELT
                                                                                                                                                                                                                                                                                                                                                                                                                        AASCLKTDQQSLSIALCYRSISTGVGKRCSVISVPMDCNQAAYSRDALAKALYERLFNWL
                                                                                                              RSKW-NQRKAAIKIQLFY-----
                                                                                                                                                                                                                                                                                                   LTRLLGVEGTTLREALTHRKI---IAKGEELLS-PLNLEQAAYARDALAKAVYSRTFTWL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EKSRVVGRTQGERSFHIFYQMLKGLSQSKLNELGLTPNAPAYEYLKKSGCFDVSTIDDSG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EKSRVVHQNHGERNFHVFYQLLEGGEEETLRRLGLERNPQSYLYLVKGQCAKVSSINDKS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NGERISKMLIR-FQSNPLLEAFGNAKTLRNDNSSRFGKYMEMQFNAVGSPIGGKITNYLL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APERGGAVRDRLLQSNPVLEAFGNAKTLRNDNSSREGKYMDVQFDFKGAPVGGHILSYLL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VSFYEVPPHLFAVADTVYRALRTERRDQAVMISGESGAGKTEATKRLLQEY----AETCP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GVPDFVLLNQIT-ENAFIDNLTMRHKSDNIYTYIGDVVISRNPFKNLNIYKESDIKAYNG
                                                                                                                                                                                                                                                                                                                                                                              VSKIN-----TLSIVHREGTVIGILDIYGFEVFQNNSFEQLNINFCNEKLQQLFIELT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EFKIIVKAMETLGLKESDQNSIWRILAAILHIGNITFAEAAEQRTGTTTVKVSDTKSLAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DWKVMRKALSVIDFTEDEVEDLLSIVASVLHLGNIHFAADEDSNAQVTT-----ENQLKY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RYKYEMPPHIYALANDAYRSMRQSQENQCVIISGESGAGKTEASKKIMQFLTFVSSNQSP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        694
716
796
101
101
556
858
1003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ۸A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 722
745
1003
108
630
958
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3
8
2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       114852
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      . 28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           171;
                                                               -WPKDPSILDRAVQLTHKI----HNCWRAEKMILSLGAG
                                                                                                           -RSYRYNKW----FRELHRAFKDVARDPQWGKQVF--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MΨ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 1739; DB 1;
Pred. No. 9.5e-103;
1; Mismatches 328;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEMBRANE-BINDING (POTENTIAL). B6E758BEC035766F CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          IQ 1.
IQ 2.
NON ALPHA-HELICAL, C-TERMINAL DOMAIN.
ATP (BY SIMILARITY).
ACTIN-BINDING.
                                          -DNYPQSVPRLFISTRLGTEEI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 1003;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         154;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
944
                    841
                                                               791
                                                                                                                                                       710
                                                                                                                                                                            731
                                                                                                                                                                                                                        671
                                                                                                                                                                                                                                                                  611
                                                                                                                                                                                                                                                                                                              552
                                                                                                                                                                                                                                                                                                                                    475
                                                                                                                                                                                                                                                                                        530
                                                                                                                                                                                                                                                                                                                                                         494
                                                                                                                                                                                                                                                                                                                                                                              419
                                                                                                                                                                                                                                                                                                                                                                                                   434
                                                                                                                                                                                                                                              590
                                                                                                                                                                                                                                                                                                                                                                                                                         366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        318
                                                                                                                                                                                                                                                                                                                                                                                                                                              374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         29;
```

SMART; SMART;

TE; PS50002; SH3; 1.

PRINTS; PRO0193; MYOSINHEAVY.
PRINTS; PR00452; SH3DOMAIN.
ProDom; PD000066; SH3; D1.
ProDom; PD000355; myosin_head;

Pfam; PF00063; myosin_head; 1. Pfam; PF00612; IQ; 1.

```
덩
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                   InterPro; IPR000048; IQ_region.
InterPro; IPR001452; SH3.
InterPro; IPR001609; myosin_head.
                                                                                                                                                                                                                                                          use by non-profit institutions as long a modified and this statement is not removed entities requires a license agreement (See )
                                                                                                                                                                                                                                                                                                                                                                                                                                     Hamel C., Fizames C., Levi-Acobas F., Depetris D., Mattei M.-G.,

Weil D., Pujol R., Petit C.;

"Cloning of the genes encoding two murine and human cochlear
unconventional type I myosins.";

Genomics 40:332-341(1997).

-i-FUNCTION: MYOSINS ARE ACTIN-BASED MOTOR MOLECULES WITH ATPASE
-ACTIVITY. UNCONVENTIONAL MYOSINS SERVE IN INTRACELLULAR MOVEMENTS.

THEIR HIGHLY DIVERGENT TAILS ARE PRESUMED TO BIND TO MEMBRANOUS
COMPARTMENTS, WHICH WOULD BE MOVED RELATIVE TO ACTIN FILAMENTS (BY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                16-0CT-2001
16-0CT-2001
                                                                                                                                           Pfam; PF00018; SH3; 1
                                                                                                                                                                                             HSSP; P08799; IMND.
MGD; MGI:107711; MyO1f.
                                                                                                                                                                                                                        EMBL; X97650;
                                                                                                                                                                                                                                               or send an email to license@isb-sib.ch)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STRAIN=BALB/c; TISSUE=Cocniea; MEDLINE=97237053; PubMed=9119401;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mus musculus (Mouse)
Eukaryota; Metazoa;
                                                                                                                                                                                                                                                                                                               between
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Crozet F., Amraoui
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      P70248;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Myosin If
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           16-OCT-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MY1F_MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   953
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             945
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      842
                                                                                                                                                                                                                                                                                            s SWISS-PROT entry is copyright. It is produced through a collaboration ween the Swiss Institute of Bioinformatics and the EMBL outstation - European Bioinformatics Institute. There are no restrictions on its
                                                                                                                                                                                                                                                                                                                                              DETECTABLE IN HEART.
SIMILARITY: CONTAINS 1 MYOSIN-LIKE GLOBULAR HEAD DOMAIN.
SIMILARITY: CONTAINS 1 IQ DOMAIN.
SIMILARITY: CONTAINS 1 SH3 DOMAIN.
                                                                                                                                                                                                                                                                                                                                                                                                  SIMILARITY).
TISSUE SPECIFICITY: EXPRESSED
BRAIN, LUNG, SMALL INTESTINE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VTSISISPMADTFLVLHCKAPQRDFVLDLGCNGYEAVSEITTVIVQQ----VLKLTGVKLS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VQFTSSITYNNARPKGSDTILTFAPINNDPKLIGSQFKKGKGKEATIQF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADRVNNININ----QGSIT-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LTGISVSSLSDSLFVLHV---QREDNKQKG------DVVLQSDHVIETLTKTALS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ----STYGDTEVLFADYVIKVNPKGV-PQRRGIVVTGTNIYKHDPKNYKVNKWGTPLVD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (Rel. 40, Created)
(Rel. 40, Last seq
(Rel. 40, Last ann
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (Mouse)
                                                                                                                                                                                                                        CAA66251.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A.E., Blanchard S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Last sequence up
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TISSUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Craniata; Veri
Sciurognathi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SPECIFICITY
                                                                                                                                                                                                                                                                                                                                                                                                   TESTIS
                                                                                                                                                                                                                                                                                                                                                                                                                 IN LIVER, KIDNEY, SPLEEN,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1099
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     , Lenoir M., ku
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Vertebrata;
                                                                                                                                                                                                                                                                                                                                                                                                     AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ΑA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FAGGPGRDGIIDF
                                                                                                                                                                                                                                                                                   as its content
                                                                                                                                                                                                                                                          http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Muridae;
                                                                                                                                                                                                                                                                       Usage
                                                                                                                                                                                                                                                                                                                                                                                                     COCHLEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ripoll C.,
Mattei M.
                                                                                                                                                                                                                                                                       bу
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Euteleostomi;
; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                   BARELY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1018
                                                                                                                                                                                                                                                                       and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                d
                                                                                                                                                                                                                                                                                                                                                                                                                 EYE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         , Vago
.-G.,
                                                                                                                                                                                                                                                                       for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  895
```

```
δÃ
                                                                                   δõ
                                                                                                                    В
                                                                                                                                            δ
                                                                                                                                                                              Ъ
                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                                   Вþ
                                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                             Ъ
                                                                                                                                                                                                                                                                                                                                                                                      Qy
                                                                                                                                                                                                                                                                                                                                                                                                                         B
                                                                                                                                                                                                                                                                                                                                                                                                                                                 δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DЪ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
밁
                                                        Ъ
                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SQ ST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Myosin; An
Multigene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DOMAIN
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NP_BIND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DOMAI
                             858
                                                                                                                                                                                                                                                                        618
                                                                                                                                                                                                                                                                                                      536
                                                                                                                                                                                                                                                                                                                                                               488
                                                                                                                                                                                                                                                                                                                                                                                             499
                                                                                                                                                                                                                                                                                                                                                                                                                           428
                                                                                                                                                                                                                                                                                                                                                                                                                                                         444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             256
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               148
720
                                                                                                                    705
                                                                                                                                                  738
                                                                                                                                                                                                            678
                                                                                                                                                                                                                                          596
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  28 GVQDFVLLENFTSEAAFIENLRRRFRENLIYTYIGPVLVSVNPYRDLQIYSRQHMERYRG 87
               ASEIFKGKKDNYPQSVPRLFISTRLGTEEISPRVLQSLGS-EPIQYAVPVVKYDRKGYKP 916
                                                                                                                                                                                                                                                                                                                                                                             KPHPHFLTHKLADQKTRKSLDRGEFRLLHYAGEVTYSVTGFLDKNNDLLFRNLKETMCSS 558
                                                                                                                                                                                                                                                                                                                                                                                                                                                     AEGIAWEPVQYFNNKIICDLVEEKFK--GIISILDEECL---RPGEATDLTFLEKLEDTV 498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   QKPQEEYS-----IGVLDIYGFEIFQKNGFEQFCINFVNEKLQQIFIELTLKAEQEEYV 427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GRLQEKLTSRKMDSKWGGRSESIDVTLNVEQAAYTRDALAKGLYARLFDFLVEAINRAM- 373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TLSAMQVMGFRQACQQLVLQLVAGILHLGNISF-CEEGNYARVESVDSLAFPAYLLGIDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VVHQNHGERNFHVFYQLLEGGEEETLRRLGLERNPQSYLYLVKGQCAKVSSINDKSDWKV 267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGAVRDRLLQSNPVLEAFGNAKTLRNDNSSRFGKYMDVQFDFKGAPVGGHILSYLLEKSR 207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VSFYEVPPHLFAVADTVYRALRTERRDQAVMISGESGAGKTEATKRLLQFYAETCPAPER 147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GVDDMVLLSQIT-EDAIVRNLHKRFMDDYIFTYIGSVLISVNPFKQMPYFTDREIDLYQG 76
                                                                                                                                                                                                                                                        FDEVLIRHQVKYLGLMENLRVRRAGFAYRRKYEAFLQRYKSLCPETWPMWAGRPQDGVAV 677
                                                                                                                                                                                                                                                                                                                               MNPIMAQCF-DKSELSDKKRPETVATQFKMSLLQLVEILRSKEPAYIRCIKPNDAKQPGR 617
                                                                                                                                                                                                                                                                                                                                                               GTHEHF-----NSWSAG-FVIHHYAGKVSYDVSGFCERNRDVLFSDLIELMQSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SKDAESPSWRSTTVLGLLDIYGFEVFQHNSFEQFCINYCNEKLQQLFIELTLKSEQEEYE 443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TTLREALTHRKIIAK----GEELLSPLNLEQAAYARDALAKAVYSRTFTWLVRKINRSLA 383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MRKALSVIDFTEDEVEDLLSIVASVLHLGNIHFAADEDSNAQVTTENQLKYLTRLLGVEG 327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VQHVKDIILQSNPLLEAFGNAKTVRNNNSSRFGKYFEIQFSRGGEPDGGKISNFLLEKSR 196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AVQYEEPPHIYALTDNMYRNMLIDCENQCVIISGESGAGKTVAAKYIMGYISKVSGGGDK 136
ASNILLNKKERRRNSINRNFVGNYLGLEE-RPELRQFLAKRERVDFADSVTKYDRR-FKP
                                                                                                                                                                                                                                       WEESRVKHQVEYLGLRENIRVRRAGFAYRRQFSKFLQRYAILTPETWPRWRGDERQGVQH
                                                                                                                                                                                                                                                                                                                                                                                                                         QEGIRWTPIEYFNNKIVCDLIENKLSPPGIMSVLDDVCATMHATGGGADQTLLQKLQAAV 487
                                                                                   LLNLRRQLPRNVLDTSWPTPPPALREASELLRELCMKNMVWKYCRSISPEWKQQLQQKAV 857
                                                                                                                                                VKRSAICIQSWWRGTLGRRKAAKRKWAAQTIRRLIRGFILRHSPRCPENAFFLDHVRASF 797
                                                                                                                                                                              LLRAVNMEPDQYQMGSTKVFVKNPESLFLLEEMRERKFDGFARTIQKAW---
                                                                                                                                                                                                           LVRHLGYKPEEYKMGRTKIFIRFPKTLFATEDSLEVRRQSLATKIQAAWRGFHWRQKFLR 737
                                                                                                                                                                                                                                                                                                   DQDFLRMLFPEKLNIDKKGRPSTAGSKIKKQANDLVSTLKKCTPHYIRCIKPNETKRPRD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   399;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATP-binding; Actin-binding; Calmodulin-binding; SH3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             697
1042
579
110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1099
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             677
722
1099
589
117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 32.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            125947
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  159;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pred. No. 6.7e-102;
9: Mismatches 297;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 1726.5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ATP (POTENTIAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACTIN-BINDING (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MYOSIN HEAD-LIKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          7D11592310C0C8F0 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels 195;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 1099
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    domain;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                       H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         314
                                                                                                                                                                              704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                24;
```

```
RESULT 14
MYSB_DICDI
g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   20
                                                                                                                                                                                                                                                                                                                                                                                                                       1SOFORM. 7,

1SOFORM. 7,

1J. BIOL. Chem. 268:14981-14990(1993).

1J. BIOL. Chem. 268:14981-14990(1993).

1. FUNCTION: MYOSIN IS A PROTEIN THAT BINDS TO ACTIN & HAS ATPASE PROTEIN THAT BINDS TO ACTIN & HAVE A ROLE IN CHEMOTAXIS AND ACTIVATED BY ACTIN. MYOSIN IB MAY HAVE A ROLE IN CHEMOTAXIS AND AGGREGATION; IT COULD SERVE TO STABILIZE AND EVEN RETRACT CORTICAL STRUCTURES, SUCH AS SESUDOPODS AND LAMELLOPODS.

1. SUBGUNIT: MYOSIN I HEAVY CHAIN IS SINGLE-HEADED. DIMER OF A HEAVY AND A LIGHT CHAIN. INABILITY TO SELF-ASSEMBLE INTO FILAMENTS.

2. SUBCELLULAR LOCATION: HIGHEST CONCENTRATION JUST BENEATH THE PLASMA MEMBRANE IN THE ANTERIOR PSEUDOPOD AT THE LEADING EDGE OF
               DictyDb; DD01047; myc
InterPro; IPR000048;
                                                                                                                                                              This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Myosin IB heavy chain. MYOA OR DMIB.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          P34092;
01-FEB-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Jung G., Fukui Y., Martin B., Hammer J.A. III;
"Sequence, expression pattern, intracellular localization,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDLINE=93315475; PubMed=8325874;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STRAIN-AX3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE OF 481-490;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             chain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE=89345628; PubMed=2762320;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Mycetozoa; NCBI_TaxID=44689;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Dictyostelium discoideum (Slime mold).
Eukaryota; Mycetozoa; Dictyosteliida; Dictyostelium.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     01-FEB-1994 (Rel. 28, Created)
01-FEB-1994 (Rel. 28, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MYSB_DICDI
                                                      HSSP; P08799;
                                                                        PIR; A33284; A33284.
                                                                                          EMBL; M26037; AAA33229.1;
                                                                                                                               or send an
                                                                                                                                                  entities requires
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          targeted disruption of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Proc. Natl.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             "Dictyostelium discoideum contains a gene encoding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Jung
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               964
                                                                                                                                                                                                                                                                    THE CELL.

THE CELL.

DOMAIN: TH.1 BINDS DIRECTLY TO ANIONIC PHOSPHOLIPID MEMBRANES; 
MYOSINS I COULD THEREFORE MOVE ACTIN RELATIVE TO MEMBRANES AND 
VICE VERSA. TH.2 AND SH3 BIND TIGHTLY TO F-ACTIN; THIS TOGETHER 
WITH THE NUCLECTIDE SENSITIVE SITE IN THE HEAD, ALLOWS SINGLE 
MOLECULES OF MYOSIN I TO CROSS-LINK ACTIN FILAMENTS.

SIMILARITY: CONTAINS 1 SH3 DOMAIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ດ
:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGGTRN--VTFSAGQVNLAVLKAGGKTLTI 913
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGPGRDGIIDFTSGS-ELLITKAKNGHLAV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REDNKQKGDVVLQSDHVIETLTKT---ALSADRVNNININQGSITF------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                IKRDLILTPKCVYVIGTEKVKRGPEKGLVREVLKKKLDIQALRGVSLSTRQDDFFIL--Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RPRQLLLTPSAVVIVEDAKV---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Saxe C.L. III, Kimmel A.R., Hammer J.A. III;
                                                                                                                           equires a license agreement (See http://www.isb-sib.ch/announce/email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Acad. Sci. U.S.A. 86:6186-6190(1989)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ----AADTFLESIFKTEFVSLLCKRFEEAARRPLPLTFQDILQFRVKKKGWG 885
                                                      1MND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STANDARD;
                                   myoA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      656-666 AND 783-798
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         the Dictyostelium myosin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1036
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1111 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -- KQRIDYANLTGISVSSLSDSLFVLHVQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             a myosin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          heavy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          chain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ----A 1007
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             I heavy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  835
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       963
```

InterPro;

IPR000048; IQ_region IPR001452; SH3.

IPR001609;

myosin_head

```
В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local S
Matches 384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DOMAIN
MOD_RES
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DOMAIN
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SMART;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PROSITE; PS50002; SH3; 1.
Myosin; Actin-binding; ATP-binding;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRINTS; PRO0193; MYOSINHEAVY.
PRINTS; PR00452; SH3DOMAIN.
ProDom; PD000066; SH3; 1.
ProDom; PD000355; myosin_head;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Chemotaxis;
                                                                613
                                                                                         529
                                                                                                                 554
                                                                                                                                          483
                                                                                                                                                                 496
                                                                                                                                                                                         423
                                                                                                                                                                                                                  440
                                                                                                                                                                                                                                           368
                                                                                                                                                                                                                                                                    380
                                                                                                                                                                                                                                                                                             308
                                                                                                                                                                                                                                                                                                                                                                                                                                                129
                                                                                                                                                                                                                                                                                                                      328
                                                                                                                                                                                                                                                                                                                                             248
                                                                                                                                                                                                                                                                                                                                                                     268
                                                                                                                                                                                                                                                                                                                                                                                              189
                                                                                                                                                                                                                                                                                                                                                                                                                       208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        28
          RPQDGVAVLVRHLGYKPEEYKMGRTKIFIRFPKTLFATEDSLEVRRQSLATKIQAAWRGF
                                                                                                                                                                                                                                                    GVQDFVLLENETSEAAFIENLRRRFRENLIYTYIGFVLVSVNPYRDLQIYSRQHMERYRG
                                    KQPGRFDEVLIRHQVKYLGLMENLRVRRAGFAYRRKYEAFLQRYKSLCPETWPMWA--
                                                                                     AIQCSKMPFLASLFNEDTGSLQKKRPTTAGFKIKTSAGELMKALSQCTPHYIRCIKPNET
                                                                                                             TMCSSMNPIMAQCEDKSELS-DKKRPETVATQEKMSLLQLVEILRSKEPAYIRCIKPNDA
                                                                                                                                        GIYDGHLHWRGMT
                                                                                                                                                             DTVKPHPHF---LTHKLADQKTRKSLDRGEFRLLHYAGEVTYSVTGFLDKNNDLLFRNLKE
                                                                                                                                                                                                     EEYEAEGIAWEPVQYFNNKIICDLVEEKF-KGIISILDEECL---RPGEATDLTFLEKLE
                                                                                                                                                                                                                                        QSLSY--YKSP---YQNVIGILDIFGFEIFEKNGFEQFCINFVNEKLQQFFIELTLKAEQ
                                                                                                                                                                                                                                                                                                          TTLREALTHRKIIAKG------EELLSPLNLEQAAYARDALAKAVYSRTETWLVRKIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VSFYEVPPHLFAVADTVYRALRTERRDQAVMISGESGAGKTEATKRLLQFYAETCDAPER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GTDDLVMLPK-VSEDEICENLKKRYMNDFIYTNIGPVLISVNPFRNLNNSGPDFIEAYRG
                                                                                                                                                                                                                                                                                         ATLQNAILFRVINTGGAGGAGNRRSTYNVPQNVEQANGTRDALARTIYDRMFSWLVEKVN
                                                                                                                                                                                                                                                                                                                                           VRQAMDTIGLTAQEQSDIIRIVACVLHIGNIYFIEDDKGNAAIYDPNALELAASMLCIDS
                                                                                                                                                                                                                                                                                                                                                                 {\tt MRKALSVIDFTEDEVEDLLSIVASVLHLGNIHFAADEDSNAQVTTENQLKYLTRLLGVEG}
                                                                                                                                                                                                                                                                                                                                                                                                                   VVHQNHGERNFHVFYQLLEGGEEETLRRLGLERNPQSYLYLVKGQCAKVSSINDKSDWKV
                                                                                                                                                                                                                                                                                                                                                                                                                                            VEYVKHVILESNPLLEAFGNAKTLRNNNSSRFGKYFEIQFDKAGDPVGGKIYNYLLEKSR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGAVRDRLLQSNPVLEAFGNAKTLRNDNSSRFGKYMDVQFDFKGAPVGGHILSYLLEKSR
                                                                                                                                                                                      EEYVREGIKWEPIKYFNNQIVCDLIEGKSPPGIFSLLDDICSTLHAQSTGTDQKFLEKMA
                                                                                                                                                                                                                                                                                                                                                                                           VVYQNPGERNFHIFYQLLRGASAQEKRDYVLS-SPESYYYLNQSQCYTVDGINDVSDYAE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KHAQEVPPHVYQLAESAYRAMKNDQENQCVIISGESGAGKTEAAKLIMGYVSAISGSTEK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PF00063; myosin_head; 1. PF00612; IQ; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 384;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SM00242; MYSC;
SM00326; SH3; J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            695
922
1053
102
547
951
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Phosphorylation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        694
921
1052
1111
109
627
1015
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           31.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                124313
172;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ž.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 1692.5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GLY/PRO/ALA-RICH SH3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MYOSIN HEAD-LIKE.
TAIL HOMOLOGY REGION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACTIN-BINDING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PHOSPHORYLATION (BY SIMILARITY).
                                                                                                                                       -GAFAIKHYAGEVTYEAEGFSDKNKDTLFFDLIE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ed. No. 9.96
Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CD6386F08DC5642F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SH3 domain;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ).9e-100;
les 312;
<del>::</del>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HT)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Multigene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          .2)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              187;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                             612
                                                                                                                                                                                        482
                                                                                                                                                                                                                                        422
                                                             669
                                                                                                                                      528
                                                                                                                                                               553
                                                                                                                                                                                                                                                                 439
                                                                                                                                                                                                                                                                                                                  379
                                                                                                                                                                                                                                                                                          367
                                                                                                                                                                                                                                                                                                                                           307
                                                                                                                                                                                                                                                                                                                                                                  327
                                                                                                                                                                                                                                                                                                                                                                                                                                             188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              21;
```

Qy

Ş В

₽ Š В Ş В Š В Š 밁 Š

.

S 밁 S 밁 Ş 맑 δ 망 S

modified entities or send a

non-profit institutions as long and this statement is not removed requires a license agreement (See an email to license@isb-sib.ch).

There are no restrictions ng as its content is in

Usage

http://www.isb-sib.ch/announce/

and tor

no

an

```
Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DЪ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ΩV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MYSD_DICDI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                      This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              01-FEB-1994 (Rel. 28, Created)
01-FEB-1994 (Rel. 28, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                  Jung
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1012
                                                                                                                                                                                                                                                                                                                                                                       targeted
                                                                                                                                                                                                                                                                                                                                                                                                             MEDLINE=93315475; PubMed=8325874;
                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NCBI_TaxID=44689;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Dictyostelium discoideum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MYOD OR DMID.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Myosin ID heavy chain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MYSD_DICDI
                                                                                                                                                                                                                                                                                                                                                                                    'Sequence,
                                                                                                                                                                                                                                                                                                                                                        soform."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             884
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                832
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                907
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           649
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      707
                                                                                                        THE CELL.

THE CELL.

DOMAIN: TH:1 BINDS DIRECTLY TO ANIONIC PHOSPHOLIDID MEMBRANES; DOMAIN: TH:1 BINDS DIRECTLY TO ANIONIC PHOSPHOLIDID MEMBRANES AND MYOSINS I COULD THEREFORE MOVE ACTIN RELATIVE TO MEMBRANES AND VICE VERSA, TH:2 AND SH3 BIND TIGHTLY TO F-ACTIN; THIS TOGETHE WITH THE NUCLEOTIDE-SENSITIVE SITE IN THE HEAD, ALLOWS SINGLE MOLECULES OF MYOSIN I TO CROSS-LINK ACTIN FILAMENTS.

SIMILARITY: CONTAINS 1 MYOSIN-LIKE GLOBULAR HEAD DOMAIN.

SIMILARITY: CONTAINS 1 SH3 DOMAIN.
                                                                                                                                                                                                                                 PLASMA MEMBRANE IN THE ANTERIOR PSEUDOPOD
                                                                                                                                                                                                                                                                                                                                                                                                  Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KE--ISFQKSEQCPTLVVKKGGKGLIGTIASGLPS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RDGIIDFTSGSE---LLITKAKNGHLAVVAPRLNS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VFHLPEHDQVIENDKKTEIIIVLVEYFKAIGGGSLNVQFSDRIN--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VLHVQRED----NKQKGDVVLQSDHVIETLTKTALS---ADRVNNININQGSITFAGGPG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VKYDRKGYKPRPRQLLLTPSAVVIVEDAKVK-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              HWRQKFLRVKRSAICIQSWWRGTLGRRKAAKRKWAAQTIRRLIRGFILRHSPRCPENAFF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DAIEGCKTIFQDMNLEAGQWQLGKTKVFIRHPETVFLLEEALDKKDFDCTAKIQKAFR--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     IKIDRRA-KOKNYEMVLTDOALYFVEKSIKKKVLVHTLIRRVGLREIKGVSISTLSDNVI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        HSLEQRAQIAHMEKDKKERQRNSIDRKETSDYIDEENQEGLQEAMQNAHKKERVVEADTV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  QQLQQKAVASEIFKGKKDNYPQSVPRLFISTRLGTEE---ISPRVLQSLGSEPIQYAVPV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LDHVRASELLNLRRQLPRNVLDTSWPTPPPALREASELLRELCMKNMVWKYCRSISPEWK
                                                                                                                                                                                                                                                                                                                                                                Mycetozoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                        AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               eum (Slime mold)
Dictyosteliida;
                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                       604-610; 733-742 AND 914-928
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Dictyostelium.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ą
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           916
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1043
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -QRIDYANLTGISVSSLSDSLF
                                                                                                                                                                                                                                 AT THE LEADING
                                                                                                                                                                                      AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1011
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              958
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   906
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  711
```

```
δÃ
                                                                                                                                                                                                 Q
                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                 QΥ
                                                                                                                                                                                                                                                                     DЬ
                                                                                                                                                                                                                                                                                          δÃ
                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                     ð
                    δÃ
                                          Вþ
                                                            δÃ
                                                                                       ₽
                                                                                                         Q
                                                                                                                                  В
                                                                                                                                                                                 рь
                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                               Ъ
                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DictyDb; DD01048; myoD.

R DictyDb; DD01048; myoD.

R InterPro; IPR001652; SH3; 1.

R InterPro; IPR001609; myosin_head.

R Pfam; PF00018; SH3; 1.

R PRINTS; PR00193; MYOSINLEAVY.

R PRINTS; PR00452; SH3DOMAIN.

R ProDom; PD000066; SH3; 1.

R ProDom; PD000355; myosin_head; 1.

R ProDom; PD000355; myosin_head; 1.

R PROSITE; SM00326; SH3; 1.

R PROSITE; PS50002; SH3; 1.

R PROSITE; PS50002; SH3; 1.

R PROSITE; PS50002; SH3; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DOMAIN
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EMBL; L16509; -; NOT_ANNOTATED_CDS. PIR; A47106; A47106. HSSP; P29354; 1GRI.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NP_BIND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Multigene family.
                                                                                                                                                                                                      378
                                                                                        480
                                                                                                                                     421
                                                                                                                                                            438
                                                                                                                                                                                                                             306
                                                                                                                                                                                                                                                   325
  591
         557
                                                                                                             497
                                                                                                                                                                                  366
                                                                                                                                                                                                                                                                          246
                                                                                                                                                                                                                                                                                               267
                                                                                                                                                                                                                                                                                                                    187
                                                                                                                                                                                                                                                                                                                                                                  127
                                                                                                                                                                                                                                                                                                                                                                                        147
                                                                                                                                                                                                                                                                                                                                           207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local
                                                                                                                                                                                                                                                                                                                                                                                                             67
                                                                                                                                                                                                                                                                                                                                                                                                                                   87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                28
                                                                                                                                                                                                                                                                                                                                                                                                                                                          æ
                                                                                                                                                                                                                                                                                                                                                               GVQDFVLLENFTSEAAFIENLRRRFRENLIYTYIGPVLVSVNPYRDLQ-IYSRQHMERYR 86
                                         INRSLASKDAESPSWRSTTVLGLLDIYGFEVFQHNSFEQFCINYCNEKLQQLFIELTLKS 437
                                                                                                                                                                                                                                                                                    VMRKALSVIDFTEDEVEDLLSIVASVLHLGNIHFAADEDSNAQVTTENQ--LKYLTRLLG : ||: ||: |: |: |: |: |: |: |:
                                                                                                                                                                                                                                                                                                                                                                                                          GVSFYEVPPHLFAVADTVYRALRTERRDQAVMISGESGAGKTEATKRLLQFYAETCPAPE 146
| ||:||| :||: | : | 1:||:||||||| | ::|: |
| GKFRYELPPHAYAVADDMYRSMYAEGQSQCVIISGESGAGKTEAAKLIMQYIAAVSGKGA 126
                                                                                                                                                                                                                                                                                                                                                                                                                                                         SFSSHAHF-----QSAAQS-;SSSFTIKHYAGDVEYCAEGFVDKNKDLLFNDLVELAA
                                                                                                   VNSALGYKONS-----QSLMIGILDIYGFEIFEKNGFEQMVINYVNERLQQIFIELTLKT
                                                                                                                                                                                                                                        VEGTTLREALTHRKI------IAKGEELLSPLNLEQAAYARDALAKAVYSRTFTWLVRK 377
                                                                                                                                                                                                                                                                       DVCKAMKVIGLTDSEQKEVFRLVAAILYLGNVGFKNNAKDEAAIDQQSKKALENFAFLMQ 305
                                                                                                                                                                                                                                                                                                                                 RVVHQNHGERNFHVFYQLLEGGEEETLRRLGLERNPQSYLYLVKGQCAKVSSINDKSDWK 266
NDFDTSLVMHQVKYLGLLENVRIFGRIRRAGYAYRQTYDKFFYRYRVCCKETWPNWTGGF
                                                                                                                                                                                                                             TDVSSCEKALCFRTISTGTQGRSARVSTYACPQNSEGAYYSRDALAKALYSRLFDWIVGR
                                                                                                                                                                                                                                                                                                                   RVVYQTKGERNFHIFYQLLSGANQQLKSELRLD-TPDKFNYLSASGCYTVDGVDDSGEFQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    tch 29.7%; so al Similarity 35.8%; Pu 372; Conservative 177;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  681
962
1022
101
1016
1113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AA; 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         680
961
1021
1110
108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    124637
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 1601; DB 1; Length 1113;
Pred. No. 6.5e-94;
7; Mismatches 301; Indels 188;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATP (BY SIMILARITY).
ALA/GLY/PRO-RICH.
W; 07FFB6C7FA7C2A08 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SH3.
GLY/PRO/ALA-RICH (TH.2).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MYOSIN HEAD-LIKE.
TAIL HOMOLOGY REGION 1 (TH.1).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                 615
                                                                                                                                                                                                                             365
                                                                                                                                                                                                                                                                                              324
                                                                                                                                                                                                                                                                                                                    245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      26;
```

Search completed: December 9, 2002, 16:45:00 Job time: 32 secs

'n

•				
			·.	
	-			
	a			
	•			

. .

```
Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Title:
Perfect score:
                                                                                                                                                                                                                                                                                        Database :
                                                                                                                                                                                                                                                                                                                  Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                   Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      OM protein - protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-09-893-371-1
5398
1 MRYRASALGSDGVR
   SPTREMBL_21:*
1: sp_archea:*
2: sp_bacteria:
3: sp_fungi:*
4: sp_human:*
5: sp_invertebi:
6: sp_manmal:*
7: sp_mhc:*
8: sp_organell:
9: sp_phage:*
10: sp_plant:*
11: sp_rodent:
12: sp_virus:*
13: sp_vertebi:
14: sp_urclass:
15: sp_urclass:
16: sp_aarcheap
17: sp_archeap
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    December 9, 2002, 16:41:26; Search time 81 Seconds (without alignments) 2655.718 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     671580 seqs, 206047115 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MRYRASALGSDGVRVTMESA.....LITKAKNGHLAVVAPRLNSR 1044
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GenCore version 5.1.3 Copyright (c) 1993 - 2002 Compugen Ltd.
                                                                                                                                                                                                                                  sp_archea:*
sp_bacteria:*
sp_fungi:*
sp_unclassified:*
sp_rvirus:*
sp_bacteriap:*
sp_archeap:*
                                                                 sp_rodent:*
sp_virus:*
sp_vertebrate:*
                                                                                                                                                                  sp_mammal:*
sp_mhc:*
                                                                                                                                                    sp_organelle:*
                                                                                                                                                                                                     sp_invertebrate:*
                                                                                                                  sp_plant:*
                                                                                                                                                                                                                                                                                                                                                                                                                                         671580
```

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

16	15	14	13	12	11	10	9	8	7	6	₅	4	ω	2	_	Result
1545	1564	1573.5	1695	1712.5	1714.5	1715	1719.5	1756	1865	2629	4371	5111	5128	5261	5398	Score
28.6	29.0	29.1	31.4	31.7	31.8	31.8	31.9	32.5	34.5	48.7	81.0	94.7	95.0	97.5	100.0	Match Length
1249	1100	1186	1053	1107	1098	1109	1099	1017	1006	1035	1028	1028	1028	1028	1044	Length [
ω	5	G	σ	11	4	4	13	Ģ	11	Çī	13	0	σ	11	11	DB
Q006 47	019901	061080	Q9NGL7	Q63356	Q8WWN7	Q12965	Q90748	Q27328	Q63357	Q8T0U8	Q92002	Q28138	Q27966	Q63355	Q9ERB6	ΙĐ
-	Q19901 caenorhabdi	O61080 acanthamoeb	Q9ng17 strongyloce	Q63356 rattus norv	Q8wwn7 homo sapien	Q12965 homo sapien	Q90748 gallus gall	Q27328 caenorhabdi	Q63357 rattus norv	Q8t0u8 drosophila	Q92002 rana catesb	Q28138 bos taurus	Q27966 bos taurus	Q63355 rattus norv	Q9erb6 mus musculu	Description

Ωy

1 MRYRASALGSDGVRVTMESALTARDRVGVQDFVLLENFTSEAAFIENLRRRFRENLIYTY 60

. 45 1310.5	44 1311	43 1311.5	42 1312	41 1313.5	_	39 1326	_	_						31 1335	30 1336			27 1352	_	_		13			_	19 1504	1	17 1509.5
24.3	24.3	24.3	24.3	24.3	24.3	24.6	24.6	24.6	24.6	24				24.		24.		25.0	25.1	25.2	25.2	25.	26.	27.	27.8	27.9	27.9	28.0
1529	1515	1520	1490	1511	1242	1260	2129	1611	1547	2113	2062	1477	2179	2121	1528	2179	839	1515	1505	2357	2167	1446	1036	1215	633	633	1049	1217
10	10	10	10	10	10	10	ഗ	10	10	11	11	10	13	υı	10	13	10	10	10	ß	υı						ഗ	ω
Q9XEI4	Q9ATB7	Q39160	Q9SKB0	Q9M5A6	Q9M2K0	024516	Q9VLZ3	Q8RYE8	Q8W312	Q99MZ6	Q9JJY5	064491	Q9DGG9	Q9NH54	024518	Q9DGG8	Q9M0G3	Q39158	Q9LKB9	Q9U1M8	Q9V3Z6	Q9SVT9	Q17382	077202	Q96RI5	Q96RI6	000851	Q9Y7Z8
Q9xei4 zea mays (m	_	Q39160 arabidopsis	Q9skb0 arabidopsis	Q9m5a6 vallisneria	Q9m2k0 arabidopsis	024516 helianthus	Q.	Q8rye8 arabidopsis	ory	Q99mz6 mus musculu		064491 arabidopsis		Q9nh54 drosophila	024518 helianthus			Q39158 arabidopsis	Q91kb9 arabidopsis		Q9v3z6 drosophila	Q9svt9 arabidopsis	Q17382 caenorhabdi		homo	Q96ri6 homo sapien	000851 entamoeba h	Q9y7z8 schizosacch

ALIGNMENTS

Ma Qu	RESULTA OPERAGE OPE
Query Match 100.0%; Score 5398; DB 11; Length 1044; Best Local Similarity 100.0%; Pred. No. 0; Mismatches 1044; Conservative 0; Mismatches 0; Indels 0; Gaps 0;	DET 1 B6 Q9ERB6; Q9ERB6; Q9ERB6; Q1-MAR-2001 (TrEMBLrel. 16, Created) Q1-MAR-2001 (TrEMBLrel. 16, Last sequence update) Q1-MAR-2001 (TrEMBLrel. 21, Last annotation update) Q1-JUN-2002 (TrEMBLrel. 21, Last annotation update) NUCLCA NVOIC. MUS musculus (Mouse). MUS musculus (Mouse). EukaryOta; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalla; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus. NCBI_TaxID=10090; [1] SEQUENCE FROM N.A. Pestic-Dragovich L., Stojiljkovic L., Philimonenko A.A., Nowak G., Ke Y., Settlage R.E., Shabanowitz J., Hunt D.F., Hozak P., de Lanerolle P.; "A Myosin I Isoform in the Nucleus."; Science 0:0-0(2000). EMBL; AY00725; AA602570.1; HSSP; D8799; IMND. MGG; MGT:106612; Myolc. InterPro: IPR001048; IQ. region. InterPro: IPR00048; IQ. region. Pfam: PF00612; IQ; 3. Pfam: PF00015; myosin_head; 1. Pfam: PF00015; myosin_head; 1. PFINTS; PR00193; MYOSINHEAVY. PRINTS; PR00193; MYOSINHEAVY. PRINTS; PR00142; MYSC; 1. SMART; SM00242; MYSC; 1. SMART; SM00242; MYSC; 1.

```
1021
                 1021
                                   961
                                                    961
                                                                      901
                                                                                        901
                                                                                                         841
                                                                                                                          841
                                                                                                                                                                                                721
                                                                                                                                                                                                                  661
                                                                                                                                            781
                                                                                                                                                              781
                                                                                                                                                                                721
                                                                                                                                                                                                                                     661
                                                                                                                                                                                                                                                        601
                                                                                                                                                                                                                                                                         601
                                                                                                                                                                                                                                                                                           541
                                                                                                                                                                                                                                                                                                            541
                                                                                                                                                                                                                                                                                                                                481
                                                                                                                                                                                                                                                                                                                                                481
                                                                                                                                                                                                                                                                                                                                                                  421
                                                                                                                                                                                                                                                                                                                                                                                   421
                                                                                                                                                                                                                                                                                                                                                                                                     361
                                                                                                                                                                                                                                                                                                                                                                                                                       361
                                                                                                                                                                                                                                                                                                                                                                                                                                         301
                                                                                                                                                                                                                                                                                                                                                                                                                                                         301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61
      GSELLITKAKNGHLAVVAPRLNSR
                                                                   CRSI
                                                                                                                                         PRCPENAFFLDHVRASFLLNLRRQLPRNVLDTSWPTPPPALREASELLRELCMKNMVWKY
                                                                                                                                                                            HVQREDNKQKGDVVLQSDHVIETLTKTALSADRVNNININQGSITFAGGPGRDGIIDFTS
                                                                                                                                                                                                                                                   DKNNDLLFRNLKETMCSSMNPIMAQCFDKSELSDKKRPETVATQFKMSLLQLVEILRSKE
                                                                                                                                                                                                                                                                                                                                                              ALAKAVYSRTETWLVRKINRSLASKDAESPSWRSTTVLGLLDIYGFEVFQHNSFEQFCIN
                                                                                                                                                                                                                                                                                                                                                                                                                                     AADEDSNAQVTTENQLKYLTRLLGVEGTTLREALTHRKIIAKGEELLSPLNLEQAAYARD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GESGAGKTEATKRLLQFYAETCPAPERGGAVRDRLLQSNPVLEAFGNAKTLRNDNSSRFG
                                                                                                                                                                                                                                                                                                                                      RPGEATDLTFLEKLEDTVKPHPHFLTHKLADQKTRKSLDRGEFRLLHYAGEVTYSVTGFL
                                                                                                                  CRSISPEWKQQLQQKAVASEIFKGKKDNYPQSVPRLFISTRLGTEEISPRVLQSLGSEPI
                                                                                                                                                                                                                                                                                                                             RPGEATDLTFLEKLEDTVKPHPHFLTHKLADQKTRKSLDRGEFRLLHYAGEVTYSVTGFL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NPQSYLYLVKGQCAKVSSINDKSDWKVMRKALSVIDFTEDEVEDLLSIVASVLHLGNIHF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NPQSYLYLVKGQCAKVSSINDKSDWKVMRKALSVIDFTEDEVEDLLSIVASVLHLGNIHF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KYMDVQFDFKGAPVGGHILSYLLEKSRVVHQNHGERNFHVFYQLLEGGEEETLRRLGLER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KYMDVQFDFKGAPVGGHTLSYLLEKSRVVHQNHGERNFHVFYQLLEGGEEETLRRLGLER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MRYRASALGSDGVRVTMESALTARDRVGVQDFVLLENFTSEAAFIENLRRFFRENLIYTY
                                                                                                       ISPEWKQQLQQKAVASEIFKGKKDNYPQSVPRLFISTRLGTEEISPRVLQSLGSEPI
               1044
                                                                    960
                                                                                     960
                                                                                                       900
                                                                                                                        900
                                                                                                                                         840
                                                                                                                                                            840
                                                                                                                                                                              780
                                                                                                                                                                                               780
                                                                                                                                                                                                                 720
                                                                                                                                                                                                                                   720
                                                                                                                                                                                                                                                     660
                                                                                                                                                                                                                                                                      660
                                                                                                                                                                                                                                                                                         600
                                                                                                                                                                                                                                                                                                          600
                                                                                                                                                                                                                                                                                                                             540
                                                                                                                                                                                                                                                                                                                                              540
                                                                                                                                                                                                                                                                                                                                                                480
                                                                                                                                                                                                                                                                                                                                                                                  480
                                                                                                                                                                                                                                                                                                                                                                                                   420
                                                                                                                                                                                                                                                                                                                                                                                                                     420
                                                                                                                                                                                                                                                                                                                                                                                                                                                       360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      120
                                                                                                                                                                                                                                                                                                                                                                                                                                      360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         60
```

β δ δ B 8 B 8

B 8

8 8 8

Ş

B 5

B 5 B 5

45 A

δ

۸.

RESULT Q63355

P &

```
Ωy
                                      В
                                                      Qy
                                                                           В
                                                                                            Qy
                                                                                                             B
                                                                                                                               Qy
                                                                                                                                                                δÃ
                                                                                                                                                                                         Ъ
                                                                                                                                                                                                                                              Qy
                                                                                                                                                   Дb
                                                                                                                                                                                                        Qy
                                                                                                                                                                                                                             Вþ
                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                    Q
                                                                                                                                                                                                                                                                                                      рь
                                                                                                                                                                                                                                                                                                                         Q
                                                                                                                                                                                                                                                                                                                                             Вb
                                                                                                                                                                                                                                                                                                                                                           Qy
                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity
Matches 1015; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                     Pfam; PR00612; IQ; 3.

Pfam; PR00063; myosin_head; 1.

PRINTS; PR00193; MYOSINLEAVY.

PRODOM; PD000355; myosin_head; 1.

SMART; SM00015; IQ; 2.

SMART; SM00242; MYSC; 1.

SMART; SM00242; MYSC; 1.

SEQUENCE 1028 AA; 118090 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Rattus norvegicus (Ra
Eukaryota; Metazoa; o
Mammalia; Eutheria; I
NCBI_TaxID=10116;
[1]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q63355
Q63355;
Q1-NOV-1996
Q1-NOV-1996
Q1-JUN-2002
Myosin I hear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ruppert C., Godel J., Reinhard J., Baehler M.;

MYR-2 a novel class-I Myosin identified in rat brain.";

Submitted (AUG-1993) to the EMBL/GenBank/DDBJ databases.

EMBL; X74800; CAA52807.1;

EMSP; P08799; IMND.

InterPro; IPR0001609; myosin_head.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STRAIN-SPRAGUE-DAWLEY;
 541
                    557
                                      481
                                                        497
                                                                           421
                                                                                               437
                                                                                                                361
                                                                                                                                   377
                                                                                                                                                     301
                                                                                                                                                                      317
                                                                                                                                                                                         241
                                                                                                                                                                                                                               181
                                                                                                                                                                                                                                                197
                                                                                                                                                                                                            257
                                                                                                                                                                                                                                                                   121
                                                                                                                                                                                                                                                                                     137
                                                                                                                                                                                                                                                                                                       61
                                                                                                                                                                                                                                                                                                                          77
                                                                                                                                                                                                                                                                                                                                                                17
                                   SEQEEYEAEGIAWEPVQYFNNKIICDLVEEKFKGIISILDEECLRPGEATDLTFLEKLED
                                                                                                             KINRSLASKDAESPSWRSTTVLGLLDIYGFEVFQHNSFEQFCINYCNEKLQQLFIELTLK
                                                                                                                                                                                     SSINDKSDWKYMRKALSVIDFTEDEVEDLLSIVASVLHLGNIHFAADEDSNAQVTTENQL
                                                                                                                                                                                                                                                                                                                                          SSMNPIMAQCFDKSELSDKKRPETVATQFKMSLLQLVEILRSKEPAYIRCIKPNDAKQPG
                                                                                                                                                 KYLTRLLGVEGTTLREALTHRKIIAKGEELLSPLNLEQAAYARDALAKAVYSRTFTWLVR
                                                                                                                                                            KYLTRLLGVEGTTLREALTHRKIIAKGEELLSPLNLEQAAYARDALAKAVYSRTFTWLVR
                                                                                                                                                                                                                          HILSYLLEKSRVVHQNHGERNFHVFYQLLEGGEEEALRRLGLERNPQSYLYLVKGQCAKV
                                                                                                                                                                                                                                                                SSTNPIMAQCEDKSELSDKKRPETVATQEKMSLLQLVEILRSKEPAYIRCIKPNDAKQPG
                                                                                                                                                                                                                                      HILSYLLEKSRVVHQNHGERNFHVFYQLLEGGEEETLRRLGLERNPQSYLYLVKGQCAKV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          norvegicus (Rat).
ota; Metazoa; Chordata;
ia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FROM N.A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5 (TrEMBLrel.
5 (TrEMBLrel.
2 (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                          97.5%;
98.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                       118090 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          01,
21,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Created)
Last sequences
Last anno
                                                                                                                                                                                                                                                                                                                                                                                 Score 5261; D
Pred. No. 0;
7; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Craniata; Vertebrata; Sciurognathi; Muridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                 ب
                                                                                                                                                                                                                                                                                                                                                                                                                      10E3B14FD5999CB5 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          sequence up
annotation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1028
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A
                                                                                                                                                                                                                                                                                                                                                                                                   DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        update)
on update)
                                                                                                                                                                                                                                                                                                                                                                                                   11;
                                                                                                                                                                                                                                                                                                                                                                                 6;
                                                                                                                                                                                                                                                                                                                                                                                                  Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Euteleostomi;
; Murinae; Rat
                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                            496
                                                                                                               420
                                                                                                                                                                     376
                                                                          480
                                                                                                                                                                                                          316
                                                                                                                                                                                                                                                                                                                                                              76
60C
                                                                                                                                                   360
                                                                                                                                                                                       300
                                                                                                                                                                                                                            240
                                                                                                                                                                                                                                              256
                                                                                                                                                                                                                                                                  180
                                                                                                                                                                                                                                                                                    196
                                                                                                                                                                                                                                                                                                      120
                                                                                                                                                                                                                                                                                                                                            60
                                                                                                                                                                                                                                                                                                                                                                                 0
```

```
RESULT
Q27966
AC Q2
DT Q27
DT 
                                  ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Бр
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δÃ
В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      뫄
                                                                                  Query Match
Best Local
Matches 98
                                                                                                                                                                     Pfam; PF00612; IQ; 2.
Pfam; PF00063; myosin_head; 1.
PRINTS; PR00193; MYOSINHEAVY.
PRODOM; PD000355; myosin_head; 1.
SMART; SM00015; IQ; 2.
SMART; SM00242; MYSC; 1.
SEQUENCE 1028 AA; 118020 MW; 50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Q27966 PRELIMINARY; PI
Q27966; O1-NOV-1996 (TrEMBLrel. 01, Cres
01-NOV-1996 (TrEMBLrel. 21, Lasi
01-JUN-2002 (TrEMBLrel. 21, Lasi
Myosin I.
Bos taurus (Bovine).
Eukaryota; Metazoa; Chordata; Cl
Mammalia; Eutheria; Cetartiodaci
Boyidae; Boyinae; Bos.
                                                                                                                                                                                                                                                                                                                                                    Zhu T., Ikebe M.;
"Cloning of myosin I from bovine FEBS Lett. 339:31-36(1994).
EMBL; U03420; AAA17565.1; -.
HSSP; P08799; IMND.
HSSP; P08799; IMND.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TISSUE=ADRENAL GLAMEDLINE=94148088;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               [1]
SEQUENCE FROM N.A.
SEQUENCE FROM N.A.
Only
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NCBI_TaxID=9913;
[1]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1037
                                                                                                                                                                                                                                                                                                                      InterPro; IPR001609; myosin_head.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     977
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        917
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               857
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       797
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            737
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      677
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           617
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ω
                                           17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VAPRLNSR 1044
                    MESALTARDRVGVQDFVLLENFTSEAAFIENLRRRFRENLIYTYIGPVLVSVNPYRDLQI 76
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VASEIFKGKKDNYPQSVPRLFISTRLGTEEISPRVLQSLGSEPIQYAVPVVKYDRKGYKP 916
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FLLNLRRQLPRNVLDTSWPTPPPALREASELLRELCMKNMVWKYCRSISPEWKQQLQQKA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RVKRSAICIQSWWRGTLGRRKAAKRKWAAQTIRRLIRGFILRHSPRCPENAFFLDHVRAS 796
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SDHVIETLTKTALSADRVNNININQGSITFAGGPGRDGIIDFTSGSELLITKAKNGHLAV 1036
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VASEIFKGKKDNYPQSVPRLFISTRLGTEEISPRVLQALGSEPIQYAVPVVKYDRKGYKP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FLLNLRRQLPRNVLDTSWPTPPPALREASELLRELCMKNMVWKYCRSISPEWKQQLQQKA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RVKRSAICIQSWWRGTLGRRKAAKRKWAAQTIRRLIRGFILRHAPRCPENAFFLDHVRTS
MESALTARDRYGYQDFYLLENFTSEAAFIENLRRRFRENLIYTYIGPYLVSVNPYRDLQI
                                                                                                            Similarity
                                                                                  95.0%;
ilarity 95.6%;
Conservative 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PubMed=8313976;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Chordata; Craniata; Vertebrata; Euteleostomi; Cetartiodactyla; Ruminantia; Pecora; Bovoidea
                                                                                  Score 5128; I
Pred. No. 0;
25; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Last sequence update)
Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRT;
                                                                                                                                                                          5CEFEE28CF2A52D7
                                                                                                                                                                                                                                                                                                                                                                                                                                            adrenal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1028
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ruminantia; Pecora; Bovoidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                          gland.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A
                                                                                                                              DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              update)
                                                                                                                            6
                                                                                  20;
                                                                                                                                                                          CRC64;
                                                                                  0
                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               660
60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                780
                                                                                  0;
```

```
Qγ
RESULT 4
Q28138
ID Q281
AC Q281
                                                                                                                          Qy
                                                                                                                                                         Qy
                                                                                                                                                                                                                                                                                                                                                                                   Qy
                                                                                                                                                                                                                                                                                                                                                                                                     DЪ
                                                                                                                                                                                                                                                                                                                                                                                                                   Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 QУ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Qy
                                                рЬ
                                                            Q
                                                                              Вp
                                                                                            δÃ
                                                                                                            DЬ
                                                                                                                                           DЬ
                                                                                                                                                                          Ъ
                                                                                                                                                                                        Qy
                                                                                                                                                                                                         Db
                                                                                                                                                                                                                        Qy
                                                                                                                                                                                                                                         Db
                                                                                                                                                                                                                                                     Qy
                                                                                                                                                                                                                                                                        Db
                                                                                                                                                                                                                                                                                       Qy
                                                                                                                                                                                                                                                                                                        Д
                                                                                                                                                                                                                                                                                                                     Qγ
                                                                                                                                                                                                                                                                                                                                       Вþ
                                                                                                                                                                                                                                                                                                                                                     Qy
                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                    Ъ
                                                1021
                                                               1037
                                                                              961
                                                                                             977
                                                                                                             901
                                                                                                                            917
                                                                                                                                            841
                                                                                                                                                            857
                                                                                                                                                                           781
                                                                                                                                                                                          797
                                                                                                                                                                                                         721
                                                                                                                                                                                                                         737
                                                                                                                                                                                                                                         661
                                                                                                                                                                                                                                                         677
                                                                                                                                                                                                                                                                         601
                                                                                                                                                                                                                                                                                        617
                                                                                                                                                                                                                                                                                                        541
                                                                                                                                                                                                                                                                                                                        557
                                                                                                                                                                                                                                                                                                                                        481
                                                                                                                                                                                                                                                                                                                                                        497
                                                                                                                                                                                                                                                                                                                                                                      421
                                                                                                                                                                                                                                                                                                                                                                                     437
                                                                                                                                                                                                                                                                                                                                                                                                     361
                                                                                                                                                                                                                                                                                                                                                                                                                     377
                                                                                                                                                                                                                                                                                                                                                                                                                                     301
                                                                                                                                                                                                                                                                                                                                                                                                                                                   317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SDHVIETLTKTALSADRVNNININQGSITFAGGPGRDGIIDFTSGSELLITKAKNGHLAV 1036
                                                                                                            FLLNLRRQLPRNVLDTSWPTPPPALREASELLRELCMKNMYWKYCRSISPEWKQQLQQKA
                                                                                                                                                                                                         RVKRSAICIQSWWRGTLGRRKAAKRKWAAQTIRRLIRGFILRHSPRCPENAFFLDHVRAS
                                                                                                                                                                                                                                       SEQEEYEAEGIAWEPVQYFNNKIICDLVEEKFKGIISILDEECLRPGEATDLTFLEKLED
                                                                                                                                                                                                                                                                                                                                                                                                             KINRSLASKDAESPSWRSTTVLGLLDIYGFEVFQHNSFEQFCINYCNEKLQQLFIELTLK
                                                                                                                                                                                                                                                                                                                                                                                                                                            KYLTRLLGVEGTTLREALTHRKIIAKGEELLSPLNLEQAAYARDALAKAVYSRTFTWLVR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SSINDKSDWKVMRKALSVIDFTEDEVEDLLSIVASVLHLGNIHFAADEDSNAQVTTENQL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HILSYLLEKSRVVHQNHGERNFHIFYQLLEGGEEETLRRLGLERNPQSYLYLVKGQCAKV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HILSYLLEKSRVVHQNHGERNFHVFYQLLEGGEEETLRRLGLERNPQSYLYLVKGQCAKV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FYAETCPAPERGGAVRDRLLQSNPVLEAFGNAKTLRNDNSSRFGKYMDVQFDFKGAPVGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FYAETCPAPERGGAVRDRLLQSNPVLEAFGNAKTLRNDNSSRFGKYMDVQFDFKGAPVGG
                                                VAPRLNSR
                                                               VAPRLNSR
                                                                                                                                                                          FLLNLRRQLPRNILDTSWPTPPPALREASELLRELCRKNMVWKYCRSISPEWKQQLQQKA
                                                                                                                                                                                                                                                                                                                                                                                                     KINRSLASKDAESPSWRSTTVLGLLGIYGFEVFQHNSFEQFCINYCNEKLQQLFIELTLK
                                                                                                                                                                                                                                                                                                                                                                                                                                    KYLTRLLGVEGSTLREALTHRKIIAKGEELLSPLNLEQAAYARDALAKAVYSRTFTWLVA
                                                                              SDHVIETLTKTALSADRVNNININQGSITFAGGPGRDGIIDFTPGSELLITKAKNGHLAV
                                                               1044
                                                1028
                                                                             1020
                                                                                                                                                           916
                                                                                                                                                                          840
                                                                                                                                                                                                                                                        736
                                                                                                                                                                                                                                                                                                                                                                                     496
                                                                                                                                                                                                                                                                                                                                                                                                     420
                                                                                                                                                                                                                                                                                                                                                                                                                     436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 120
                                                                                                            960
                                                                                                                            976
                                                                                                                                            900
                                                                                                                                                                                          856
                                                                                                                                                                                                         780
                                                                                                                                                                                                                        796
                                                                                                                                                                                                                                         720
                                                                                                                                                                                                                                                                         660
                                                                                                                                                                                                                                                                                        676
                                                                                                                                                                                                                                                                                                        600
                                                                                                                                                                                                                                                                                                                       616
                                                                                                                                                                                                                                                                                                                                        540
                                                                                                                                                                                                                                                                                                                                                       556
                                                                                                                                                                                                                                                                                                                                                                      480
                                                                                                                                                                                                                                                                                                                                                                                                                                    360
                                                                                                                                                                                                                                                                                                                                                                                                                                                   376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  316
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   256
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  240
```

Q28138 Q28138;

PRELIMINARY;

A

```
Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Ma
Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-NOV-1996
01-NOV-1996
01-JUN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRINTS: PR00193; MYOSĪNHEAVY.
ProDom; PD000355; myosin_head;
SMART; SM00015; IQ; 2.
SMART; SM00042; MYSC; 1.
SEQUENCE 1028 AA; 118241 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Proc.
EMBL;
HSSP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Interpro; IPR000048; IQ_region.
Interpro; IPR001609; myosin_head.
Pfam; PF00612; IQ; 2.
Pfam; PF00063; myosin_head; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mammalia; Eutheria; Ce
Bovidae; Bovinae; Bos.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Bos taurus (Bovine).
Eukaryota; Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Reizes O., Barylko
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDLINE=94294379, PubMed=8022785;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TISSUE-BRAIN;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Myosin IB.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                "Domain
                         541
   617
                                                557
                                                                        481
                                                                                              497
                                                                                                                      421
                                                                                                                                             437
                                                                                                                                                                     361
                                                                                                                                                                                            377
                                                                                                                                                                                                                   301
                                                                                                                                                                                                                                          317
                                                                                                                                                                                                                                                                  241
                                                                                                                                                                                                                                                                                          257
                                                                                                                                                                                                                                                                                                                 181
                                                                                                                                                                                                                                                                                                                                         197
                                                                                                                                                                                                                                                                                                                                                               121
                                                                                                                                                                                                                                                                                                                                                                                      137
                                                                                                                                                                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                                                                                                                                                                 77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Match
                                   SSMNPIMAQCFDKSELSDKKRPETVATQFKMSLLQLVEILRSKEPAYIRCIKPNDAKQPG
                                                                                                                                 SEQEEYEAEGIAWEPVQYFNNKIICDLVEEKFKGIISILDEECLRPGEATDLTFLEKLED
                                                                                                                                                                                                                             KYLTRLLGVEGTTLREALTHRKIIAKGEELLSPLNLEQAAYARDALAKAVYSRTFTWLVR
                                                                                                                                                                                                                                                               SSINDKSDWKVMRKALSVIDFTEDEVEDLLSIVASVLHLGNIHFAADEDSNAQVTTENQL
                                                                                                                                                                                                                                                                                                                           HILSYLLEKSRVVHQNHGERNFHVFYQLLEGGEEETLRRLGLERNPQSYLYLVKGQCAKV
                                                                                                                                                                                                                                                                                                                                                          RFDEVLIRHQVKYLGLMENLRVRRAGFAYRRKYEAFLQRYKSLCPETWPMWAGRPQDGVA
                       SSEIPILGQFFDRSELSDKKRPETVATQFKMSLLELVEILKSKEPAYVRCIKPNDSKQPG
                                                                                  TVKPHPHFLTHKLADQKTRKSLDRGEFRLLHYAGEVTYSVTGFLDKNNDLLFRNLKETMC
                                                                                                                                                                   KIKRSLASKDAESPSWRSTTVLGLLDIYGFEVFQHNSFEQFCINYCNEKLQQLFIELTLK
                                                                                                                                                                                KINRSLASKDAESPSWRSTTVLGLLDIYGFEVFQHNSFEQFCINYCNEKLQQLFIELTLK
                                                                                                                                                                                                                 KYLTRLLGVEGSTLREALTNRKIIAKGEELLSPLNLEQAAYARDALAKAVYSRTFTWLVA
                                                                      TIKQHPHFLTHKLADQRTRKSLDRGEFRLLHYAGEVTYNVTGFLDKNNDLLFRNLKETMC
                                                                                                                     SEQEEYEAEGIAWEPVQYFNNKIICDLVEEKFKGIISILDEECLRPGEATDLTFLEKLED
                                                                                                                                                                                                                                                                                                                HILSYLLEKSRVVHQNHGERNFHIFYQLLEGGEEETLRRLGLERNPQSYLYLVKGQCAKV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Z22852; CAA80476.1; P08799; LMND.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   O., Barylko B., Li C., Sudhof T.C., Albeni
Structure of a mammalian myosin I-beta.";
Batl. Acad. Sci. U.S.A. 91:6349-6353(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (TrEMBLrel.) (TrEMBLrel.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Chordata; Craniata; Vertebrata; Euteleostomi; Cetartlodactyla; Ruminantia; Pecora; Bovoidea
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     94.7%; Score 5111; [
95.3%; Pred. No. 0;
Live 27; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     118241 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          01,
01,
21,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Created)
Last seq
Last ann
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         sequence up
annotation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     95E7E806CC86B2CD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ВВ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        on update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Albenisi
beta.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ij.Р.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1028;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Bovoidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
 676
                                             616
                                                                                                                                            496
                                                                                                                                                                                          436
                                                                      540
                                                                                             556
                                                                                                                                                                                                                                        376
                       600
                                                                                                                     480
                                                                                                                                                                   420
                                                                                                                                                                                                                 360
                                                                                                                                                                                                                                                                 300
                                                                                                                                                                                                                                                                                                               240
                                                                                                                                                                                                                                                                                                                                      256
                                                                                                                                                                                                                                                                                                                                                             180
                                                                                                                                                                                                                                                                                                                                                                                    196
                                                                                                                                                                                                                                                                                                                                                                                                          120
                                                                                                                                                                                                                                                                                                                                                                                                                                 136
                                                                                                                                                                                                                                                                                                                                                                                                                                                         60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
```

В Ş В Š

-S 망 Ş В Ş

Š Вр 8 밁 δ 밁 õ 밁 Š B

В

```
RESULT
Q92002
                                                                                                                                                                                                                                                                                                                                                                                                                           Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                            Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       рь
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        QY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ър
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Db
 Query Match
Best Local
                           HSSP; P08799; 1MND.
InterPro; IPR00048; IQ_region.
InterPro; IPR001609; myosin_head
Pfam; PF00612; IQ; 2.
Pfam; PF00063; myosin_head; 1.
PRINTS; PR00193; MYOSINHEAVY.
PRODOM; PD000355; myosin_head; 1.
SMART; SM00015; IQ; 2.
SMART; SM00242; MYSC; 1.
SEQUENCE 1028 AA; 118830 MW;
                                                                                                                                                                                                                                                                                                                          Q92002
Q92002;
Q92002;
O1-NOV-1996 (Tr
O1-WV-1996 (Tr
O1-JUN-2002 (Tr
Myosin I beta.
                                                                                                                Solc C.F., Derfler B.H., Duyk
Aud. Neurosci. 1:63-75(1994).
EMBL; U14549; AAA57192.1; -.
EMBL; U14382; AAA65091.1; -.
HSSP; P08799; IMND.
                                                                                                                                                                                             MEDLINE-95083594; PubMed-7991542;
Metcalf A.B., Chelliah Y., Hudspeth A.J.;
"Molecular cloning of a myosin I beta isozyme that madaptation by hair cells of the bullfrog's internal Proc. Natl. Acad. Sci. U.S.A. 91:11821-11825(1994).
                                                                                                                                                                                                                                                                                      Rana catesbeiana (Bull frog).
Eukaryota; Metazoa; Chordata;
Amphibia; Batrachia; Anura; Ne
                                                                                                                                                                                                                                                                                                                                                                                                                           1021
                                                                                                                                                                                                                                                                                                                                                                                                                                             1037
                                                                                                                                                                   TISSUE=KIDNEY;
                                                                                                                                                                             SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                TISSUE-BRAIN;
                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                            NCBI_TaxID=8400;
                                                                                                                                                                                                                                                                                                                   AMI BETA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   977
                                                                                                                                                                                                                                                                                                                                                                                                                                                                961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                857
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      797
                                                                                                                                                                                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                                                                                                                                                                            VAPRLNSR
                                                                                                                                                                                                                                                                                                                                                                                                                                      VAPRLNSR
                                                                                                                                                                                                                                                                                                                                                                                                                                                               SDHVIETLTKTALSADRVNNININQGSITFAGGPGRDGIIDFTSGSELLITKAKNGHLAV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RVKRSAICIQSWWRGTLGRRKAAKRKWAAQTIRRLIRGFILRHSPRCPENAFFLDHVRAS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VLVRHLGYKPEEYKMGRTKIFIRFPKTLFATEDSLEVRRQSLATKIQAAWRGFHWRQKFL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RFDEVLIRHQVKYLGLMENLRVRRAGFAYRRKYEAFLQRYKSLCPETWPTWTGRPQDGVT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VLVRHLGYKPEEYKMGRTKIFIRFPKTLFATEDALEIRRQSLATKIQATWRAFHCRQKFL
 Similarity
                                                                                                                                                                                                                                                                                                                                     (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                       (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                           PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                             1044
                                                                                                myosin_head
  81
79
                                                                                                                                                                                                                                                                                      Chordata; Craniata; Ve
Anura; Neobatrachia;
 . 2%;
                                                                                                                                                                                                                                                                                                                                  01, Created)
01, Last sequence update)
21, Last annotation update)
Score
Pred.
                                                                                                                                                         G
                                                                                                                                                                                                                                                                                                                                                                           PRT;
                                                                                                                                                        .
Z
                             D15F6F99B68A90AE CRC64;
 4371;
No. 1.
                                                                                                                                                                                                                                                                                                                                                                          1028
                                                                                                                                                         Corey D
                                                                                                                                                                                                                                                                                               Vertebrata;
 DB 13;
.2e-292;
                                                                                                                                                                                                                                                                                                                                                                           B
                                                                                                                                                                                                                                                                                       Ranoidea;
         Length 1028;
                                                                                                                                                                                                                  may mediate
                                                                                                                                                                                                                                                                                               Euteleostomi;
                                                                                                                                                                                                                                                                                      Ranidae;
                                                                                                                                                                                                                                                                                      Rana
                                                                                                                                                                                                                                                                                                                                                                                                                                                               1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1036
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         976
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                916
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                736
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          796
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        780
```

Matches

17

121 137

61 77

197

<u>つ</u>へ

```
SEQEEYEAEGIAWEPVQYFNNKIICDLVEEKFKGIISILDEECLRPGEATDLTFLEKLED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SSINDKSDWKVMRKALSVIDFTEDEVEDLLSIVASVLHLGNIHFAADEDSNAQVTTENQL 316
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         YYAVTCPVSDQVETVKDRLLQSNPVLEAFGNAKTLRNDNSSRFGKYMDVQFDYKGAPVGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FYAETCPAPERGGAVRDRLLQSNPVLEAFGNAKTLRNDNSSRFGKYMDVQEDFKGAPVGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MESALTARDRVGVQDFVLLENFTSEAAFIENLRRRFRENLIYTYIGPVLVSVNPYRDLQI
                                                                                                    SDHVIETLTKTALSADRVNNININQGSITFAGGPGRDGIIDFTSGSELLITKAKNGHLAV
                                                                                                                                                                                                                                                                                                                  FLINLRRQLPRNVLDTSWPTPPPALREASELLRELCMKNMVWKYCRSISPEWKQQLQQKA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RFDEVLIRHQVKYLGLMENLRVRRAGFAYRRKYEAFLQRYKSLCPETWPMWAGRPQDGVA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DSGNPIAHQCFNRSELTDKKRPETAATQFKNSLSKLMEILMSKQPSYVRCIKPNDAKQPA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SSMNPIMAQCFDKSELSDKKRPETVATQFKMSLLQLVEILRSKEPAYIRCIKPNDAKQPG
                                        VAPRLNSR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQDEYESEGIAWEPVQYFNNKIICDLVEEKFKGIISILDEECLRPGEATDMTFLEKLED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MESALTARDRVGVQDFVLLENYTSEAAFIENLRKRFKENLIYTYIGSVLVSVNPYKELEI
                                                                               SDHVIETLTKVAITAEKINNININQGSIKFTVGPGKEGIIDFTAGSELLIAKAKNGHLSV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RFDEVLIRHQVKYLGLIENVRVRRAGFAYRRKYEIFLQRYKSLCPDTWPNWDGRAMDGVA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    814;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                        1044
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  112;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  102;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           616
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           76
                                                                               1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         360
                                                                                                                                                                                                                                        900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AC ON DIT ON DIT
                                                                       ρy
                                                                                                                      DЬ
                                                                                                                                                         QΥ
                                                                                                                                                                                                                                Qγ
                                                                                                                                                                                                                                                                                                              Q
                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                         δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                    Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δō
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  γQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
Qy
                                        B
                                                                                                                                                                                               B
                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local S
Matches 533
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     01-JUN-2002
01-JUN-2002
01-JUN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Stapleton M., Brokstein P., Hong L., Agbayani A., Carlson J. Champe M., Chavez C., Dorsett V., Farfan D., Frise E., Georg Gonzalez M., Guarin H., Li P., Liao G., Miranda A., Mungall Nunco J., Pacleb J., Paragas V., Park S., Phouanenavong S., Y C., Lewis S.E., Rubin G.M., Celniker S.; Submitted (DEC-2001) to the EMBL/GenBank/DDBJ databases. EMBL; AY069044; AAL39189.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Drosophila melanogaster (Fruit fly).
Eukaryota; Metazoa; Arthropoda; Tracheata; He
Eukaryota; Neoptera; Endopterygota; Diptera;
Ephydroidea; Drosophilidae; Drosophila.
NCBI_TaxID=7227;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GH04201p.
MY061F.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STRAIN-BERKELEY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q8T0U8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q8T0U8
    809
                                          537
                                                                             548
                                                                                                                      477
                                                                                                                                                                                               417
                                                                                                                                                                                                                                      428
                                                                                                                                                                                                                                                                               360
                                                                                                                                                                                                                                                                                                                                                           300
                                                                                                                                                                                                                                                                                                                                                                                                 308
                                                                                                                                                                                                                                                                                                                                                                                                                                        241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local Similarity
nes 533; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ب
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           æ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LGSDGVRVTMESALTARDRVGVQDFVLLENFTSEAAFIENLRRRFRENLIYTYIGPVLVS
                                      FRNLKETMCSSMNPIMAQCFDKSELSDKKRPETVATQFKMSLLQLVEILRSKEPAYIRCI
                                                                                                                                                                                                                    QLFIELTLKSEQEEYEAEGIAWEPVQYFNNKIICDLVEEKFKGIISILDEECLRPGEATD
                                                                                                                                                                                                                                                                                                                                                                                                                                    KTFLEKLTQKLAQHHHYVCHEKAPAHIKKIMLRDEFRLVHYAGEVTYSVNGFLDKNNDLL
                                                                                                                                      LTFLEKLEDTVKPHPHFLTHKLADQKTRKSLDRGEFRLLHYAGEVTYSVTGFLDKNNDLL
                                                                                                                                                                                                                                                                                                 SRTFTWLVRKINRSLASKDAESPSWRSTTVLGLLDIYGFEVFQHNSFEQFCINYCNEKLQ
                                                                                                                                                                                                                                                                                                                                                                                 AQVTTENQLKYLTRLLGVEGTTLREALTHRKIIAKGEELLSPLNLEQAAYARDALAKAVY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         VNPYKQLPIYTDDHVKAYRNKHFYEMPPHIFAVTDNAFRSLIEENRGQCVLISGESGSGK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VNPYRDLQIYSRQHMERYRGVSFYEVPPHLFAVADTVYRALRTERRDQAVMISGESGAGK 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MASFNSQLKMETGLHERDRAGVQDFVLLENYQSEEAFIGNLKKRFQEDLIYTYIGQVLIS
    KPNDAKQPGRFDEVLIRHQVKYLGLMENLRVRRAGFAYRRKYEAFLQRYKSLCPETWPMW
                                                                                                                                                                                                  DRLFSWLVQRLNISLQAKETRA---SRNNVMGILDIYGFEIFQKNSFEQFCINFCNEKLQ
                                                                                                                                                                                                                                                                                                                                                         AKVNSRDLVVTAARLLGVNASELEAALTHRTIDARGDVVTSPLNQELAIYARDALAKAVY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (TrEMBLrel.)
(TrEMBLrel.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                48.7%; Scc
51.1%; Pre
ative 180;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       21,
21,
21,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 2629; DB
Pred. No. 1.8e-
80; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Last annotation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1035
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1.8e-172;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Hexapoda;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Brachycera;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Insecta;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                George
ingall C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Muscomorpha
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ري
:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  24;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ٠
د ت
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ζ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
```

67

8;

60

94.

437

481

497 421

541 557 ₽ δ В δ В Š Вр δõ рь Š В QΥ В Ş

361

377 301 317 241 257 181

Ω 망 ρy д δõ 밁 Q 밁 Ş д Ş DЬ δ Вb 20 Ъ Q Вþ

> 841 857 781

721 737 661 677 601

797

961 977 901

В δÃ ₽

1021 1037

667

536

487

427

367

299 307

359

```
RESULT OR SULT OR SULT
                                                 Ş
       망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        da
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                 Query Match
Best Local s
Matches 426
                                                                                                                                                                                                                                                       InterPro; IPR000048; IQ_region.
InterPro; IPR001609; myosin_head.
Pfam; PF00612; IQ; 2.
Pfam; PF00063; myosin_head; 1.
PRINTS; PR00193; MYOSIN_head; 1.
ProDom; PD000355; myosin_head; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-NOV-1996
01-NOV-1998
01-JUN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Q63357
Q63357;
                                                                                                                                                                                                                                                                                                                                                                                                               Bachler M., Kroschewski R., Stoeffler H.E., Behrmann T.;
"Rat myr4 defines a novel subclass of myosin I: Identification, distribution, localization, and mapping of calmodulin-binding sites with differential calcium sensitivity.";
J. Cell Biol. 126:375-389(1994).
EMBL; X71997; CASO871.1;
HSSP; P08799; IMND.
                                                                                                                                                                                           SMART; SM00015; IQ; 1
SMART; SM00242; MYSC;
SEQUENCE 1006 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Rattus norvegicus (Rat).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1011
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDLINE-94308268; PubMed-8034741;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STRAIN-SPRAGUE-DAWLEY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Myosin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1015
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NCBI_TaxID=10116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MYR4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          951
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    956
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      897
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     903
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  837
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               846
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            777
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  657
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  668
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 597
       10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         786
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        726
                                                    28
GKADFVLMDT-VSMPEFMANLRLRFEKGRIYTFIGEVVVSVNPYKVLNIYGRDTIEQYKG
                        GVQDFVLLENETSEAAFIENLRRRFRENLIYTYIGPVLVSVNPYRDLQIYSRQHMERYRG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SLFVLHVQREDNKQKGDVVLQSDHVIETLTKTALSADRVNNINI-NQGSITFAGGPGRDG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VIDIQTGAEPGVVRDK-GHLVII
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         QSFCTKFDRHGYKSRDRFILLSNKAIYVLDGKTYKQKHRLPLDKIDF-----TLTNHND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AVPVVKYDRKGYKPRPROLLLTPSAVVIVEDAKVKO-----RIDYANLTGISVSSLSD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     IIDFTSGSELLITKAKNGHLAVV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DLMVIRIPLDLKKDKGDLILIIPRIIEFSTYIIDTVGTASIVSIVDRNSLEHNVVKGKGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PQQKRQFELKVLAEKVFKGKKNNYASSVSTWFQEDRIPKEHIQRVNDFVASTFGSEQLKY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PEWKQQLQQKAVASEIFKGKKDNYPQSVPRLFISTRLGTEEI---SPRVLQSLGSEPIQY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NEEFIANAKRMWLLRLAKELPTKVLDKSWPHAPGHCEEASGILHRLHRLHLARIYRLKLT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAFFLDHVRASFLLNLRRQLPRNVLDTSWPTPPPALREASELLRELCMKNMVWKYCRSIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WKGLMQRRKYLKLRAQVIIMQSYCRRKLAQQAAKKRREAADKIRAFIKGFITRNDAPNGF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WRGFHWRQKFLRVKRSAICIQSWWRGTLGRRKAAKRKWAAQTIRRLIRGFILRHSPRCPE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KGPGGPKAGVQQLVKDLGWDEEKYRVGETKLFIRWPRTLFDTEDAYQEKKHEIAAIIQAH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       --AGRPQDGVAVLVRHLGYKPEEYKMGRTKIFIRFPKTLFATEDSLEVRRQSLATKIQAA
                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       G (TrEMBLrel.
G (TrEMBLrel.
C (TrEMBLrel.
                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRELIMINARY;
                                                                                                                       34.5%;
                                                                                                                                                                                                116137 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01,
08,
21,
                                                                                                 158;
                                                                                            Score 1865; D
Pred. No. 8.5e
58; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Created)
Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1032
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1037
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Craniata; Vertebrata; Euteleostomi;
Sciurognathi; Muridae; Murinae; Rattus.
                                                                                                                                                                                           9AA0B626A0FDA42A CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1006
                                                                                            DB 11;
}.5e-120;
hes 301;
                                                                                       Indels
                                                                                                                                         Length
                                                                                            136;
                                                                                         Gaps
  89
                                            87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1010
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1014
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             716
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              950
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           955
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           896
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    845
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            656
                                                                                            26;
```

```
RESULT
Q27328
ID Q2
                                                                            Qy
                                                                                                     밁
                                                                                                                         QY
                                                                                                                                                  밁
                                                                                                                                                                       Qγ
                                                        В
                                                                                                                                                                                                Дb
                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                 QΥ
                                                                                                                                                                                                                                                                                        Db
                                                                                                                                                                                                                                                                                                            Qγ
                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                         Ωy
                                                                                                                                                                                                                                                                                                                                                                                DЬ
                                                                                                                                                                                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                               дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δÃ
                                                        945
                                                                                                     896
                                                                                                                          937
                                                                                                                                                  848
                                                                                                                                                                         908
                                                                                                                                                                                                798
                                                                                                                                                                                                                                                                  796
                                                                                                                                                                                                                                                                                                                                    660
                                                                              997 I
                                                                                                                                                                                                                                                                                         700
                                                                                                                                                                                                                                                                                                                                                                                 601
                                                                                                                                                                                                                                                                                                                                                                                                        618
                                                                                                                                                                                                                                                                                                                                                                                                                               541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           482
                     8
                                                                                                                                                                                                                                                                                                                                                                                                                                                   561
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               206
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       88
                                                       г.
                                                                                                  MKTIPLYNLTGLSVSNGKDQLVVFHT--KDNK-----
                                                                                                               QQLQQKAVASEIFKGKKDNYPQSVPRLFISTRLGTEEISPRVLQSLGSEPIQYAVPVV---
                                                                                                                                                                                                                                                                                                                                 --LVRHLGYKPEEYKMGRTKIFIRFPKTLFATEDSLEVRRQSLATKIQAAWRGFHWRQKF
                                                                                                                                                                                                                                                                                                                                                                             LKRKDKYMNVLFSCHVRKVNRFSKVEDRAIFVTDRHLYKMDP--
                                                                                                                                                                                            PQVRAKVAAMEMLKGQRADL--GLQRAWEGNYLASKPDTP---QTSGT----FVPVANE
                                                                                                                                                                                                                                        SYTHEVARREHGVKNMRDYGKHVKWPTPPKVLRRFEEALQSIFNRWRASQLIKTIPASDL
                                                                                                                                                                                                                                                               SFLLNLRRQL--PRNVLD----TSWPTPPPALREASELLRELCMKNMVWKYCRSISPEWK
                                                                                                                                                                                                                                                                                     ----RVVLFLQKVWRGTLARMR-YKRTKAALTIIRYYRRYKVK--
                                                                                                                                                                                                                                                                                                    LRVKRSAICIQSWWRGTLGRRKAAKRKWAAQTIRRLIRGFILRHSPRCPENAFFLDHVRA
                                                                                                                                                                                                                                                                                                                                                                                                                           PVLKNMWPEGKLSITEVTKRPLTAATLFKNSMIALVDNLASKEPYYVRCIKPNDKKSPQI 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EYEAEGIAWEPVQYFNNKIICDLVEEKFKGIISILDEECLRPGEATDLTFLEKLEDTVKP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                I I EVKNYDTTVHGKNTVIGVLDIYGFEIFDNNSFEQFCINYCNEKLQQLFIQLVLKQEQE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SLASKDAESPSWRSTTVLGLLDIYGFEVFQHNSFEQFCINYCNEKLQQLFIELTLKSEQE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       KVMRKALSVIDFTEDEVEDLLSIVASVLHLGNIHFAADEDS----NAQVTTENQLKYLTR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HGHFSSRKTCASDKILEFDR-DFRIRHYAGDVVYSVIGFIDKNKDTLFQDFKRLMYNSSN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EYQREGIPWKHIDYFNNQIIVDLVEQQHKGIIAILDDACMNVGKVTDGMFLEALNSKLGK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LLSTKADMVEKALLYR-TVATGRDIIDKQHTEQEASYGRDAFAKAIYERLFCWIVTRIND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LLGVEGTTLREALTHRKIIAKGEELLSPLNLEQ-AAYARDALAKAVYSRTETWLVRKINR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KVVADAMKVIGFKPEEIQTVYKILAAILHLGNLKFIVDGDTPLIENGKV-----VSVIAE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SRVVHQNHGERNFHVFYQLLEGGEEETLRRLGLERNPQSYLYLVKGQCAKVSSINDKSDW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             G--GAVRDRLLQSNPVLEAFGNAKTLRNDNSSRFGKYMDVQFDFKGAPVGGHILSYLLEK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SRVIVQQPGERSFHSFYQLLQGGSEQMLHSLHLQKSLSSYNYIRVGAQLK-SSINDAAEF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AEIERVKNMLLKSNCVLEAFGNAKTNRNDNSSRFGKYMDINFDFKGDPIGGHINNYLLEK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VSFYEVPPHLFAVADTVYRALRTERRDQAVMISGESGAGKTEATKRLLQFYAETCPAPER
                                                        945
                                                                              997
                                                                                                                                                                      -DRKGYKPRPRQLLLTPSAVVIVEDAKV 936
                                                                                                  DLIVCLFSKQPTHESRIGE
                                                                                                                                               TKOYKV
                                                                                                                                                                                           847
                                                                                                                        996
                                                                                                                                               895
                                                                                                                                                                                                                                                                                                                                                        735
                                                                                                                                                                                                                  907
                                                                                                                                                                                                                                         797
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   481
                                                                                                                                                                                                                                                                                    737
                                                                                                                                                                                                                                                                                                           795
                                                                                                                                                                                                                                                                                                                                 699
                                                                                                                                                                                                                                                                                                                                                                                                    677
                                                                                                                                                                                                                                                                                                                                                                              659
                                                                                                                                                                                                                                                                                                                                                                                                                                                 617
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             560
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               128
```

Q27328

PRELIMINARY;

PRT;

```
δÔ
                                             밁
                                                                               Š
                                                                                                                               В
                                                                                                                                                                            δÃ
                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                õ
                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                           δ
                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local S
Matches 405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pfam; PF00612; IQ; 1.
Pfam; PF00063; myosin_head; 1.
PRINTS; PR00193; MYOSINHEAVY.
ProDom; PD000355; myosin_head; 1
SMART; SM00015; IQ; 1.
SMART; SM00242; MYSC; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Cope M.J.T.V., Kendrick-Jones
Submitted (NOV-1993) to the EM
EMBL; 235603; CAA84673.1; -
EMBL; X75564; CAA53244.1; -
HSSP; P08799; 1MND.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Q27328;
01-NOV-1996
01-NOV-1996
01-JUN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota; Metazoa; Nematoda; Chromadorea; Rhabditidae; Peloderinae; Caenorhabditis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Caenorhabditis elegans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Myosin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Submitted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
Lloyd C.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Rhabditidae; Peloderinae; NCBI_TaxID=6239;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                HUM-5 protein.
MCEIA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      InterPro; IPR000048; IO_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              InterPro; IPR001609; myosin_head
  563
                                               489
                                                                                           503
                                                                                                                                        429
                                                                                                                                                                                   443
                                                                                                                                                                                                                                 371
                                                                                                                                                                                                                                                                            383
                                                                                                                                                                                                                                                                                                                          311
                                                                                                                                                                                                                                                                                                                                                                     323
                                                                                                                                                                                                                                                                                                                                                                                                                   251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           206
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      28
                                        HFLTHKLADQKTRKSLDRGEFRLLHYAGEVTYSVTGFLDKNNDLLFRNLKETMCSSMNPI |::: | ::: | |:: | |:: | |:: | |:: | |:: | |:: | |:: | |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:: |:
                                                                                                                                                                                                                                                    ASKDAESPSWRSTTVLGLLDIYGFEVFQHNSFEQFCINYCNEKLQQLFIELTLKSEQEEY
                                                                                                                                                                                                                                                                                                                                                                                                                                           SRVVHQNHGERNFHVFYQLLEGGEEETLRRLGLERNPQSYLYLVKGQCAKVSSINDKSDW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            G--GAVRDRLLQSNPVLEAFGNAKTLRNDNSSRFGKYMDVQFDFKGAPVGGHILSYLLEK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VSFYEVPPHLFAVADTVYRALRTERRDQAVMISGESGAGKTEATKRLLQFYAETCPAPER 147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GVEDLVLLSTIDLKSV-VQNLQLRFQKGRIYTYIGEVLVAVNPYRQLGIYEKSTVDQYKG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GVQDFVLLENFTSEAAFIENLRRRFRENLIYTYIGPVLVSVNPYRDLQIYSRQHMERYRG
                                                                                                                                 SVQN--SSRYSKSHVIGVLDIYGFEIFGTNSFEQLCINYCNEKLQQLFIELVLKQEQEEY
                                                                                                                                                                                                                                                                                                                                                                     LGVEGTTLREALTHRKIIAKGEELLSPLNLEQAAYARDALAKAVYSRTFTWLVRKINRSL
                                                                                                                                                                                                                                                                                                                                                                                                                AEVQTALRSIHTFDKQDVESMWSVIAGLIHLGNVRFIDGENSSGAVHIAEKAALQNAARC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GEIERVKNVLLRSNCILEAFGCAKTTRNDNSSRFGKYMHINFDYDGDPVGGNISNYLLEK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REIYERAPHVFAIADAAYRSMKRFGRDSCIVISGESGAGKTETSKIIMKYLAAITNVRQQ
MAQCF - -
                                                                                                                                                                               EAEGIAWEPVQYFNNKIICDLVEEKFKGIISILDEECLRPGEATDLTFLEKLEDTVKPHP
                                                                                                                                                                                                                                                                                                                       LNVTPDELAKSLSSQVVAAHGDIVKKQHDVNAAYYTRDALAKALYERLFSWMVSKVNEAI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SRVVRQQEGERNFHVFYQLVNGGDDGLLRQFGLTKDAKQYYFLNQGQSHKVASINDSRDF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   al Similarity
405; Conserva
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FROM N.A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (AUG-1994)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5 (TrEMBLrel.
5 (TrEMBLrel.
2 (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1017 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
DKSELSDKKRPETVATQFKMSLLQLVEILRSKEPAYIRCIKPNDAKQPGRFD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 32.5%; Score 1756; DB 5; 39.1%; Pred. No. 2.9e-112; tive 179; Mismatches 329;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              116557 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         01, Created)
01, Last sequence up
21, Last annotation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         J.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            461FF63A2C955ED8 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Rhabditida; Rhabditoidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 1017;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   124;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                          442
                                                                                                                                                                                                                                                                                                                       370
                                                                                                                                      488
                                                                                                                                                                                                                                                                                                                                                                     382
                                                                                                                                                                                                                                                                                                                                                                                                                   310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      87
619
                                           546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   24;
```

```
RESULT
Q90748
δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δÕ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Вр
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ъ
       PRINTS; PR00452; SH3DOMAIN.
ProDom; PD000066; SH3; 1.
ProDom; PD000355; myosin_head; 1
SMART; SM00015; IQ; 1.
SMART; SM00242; MYSC; 1.
SMART; SM00242; SH3; 1.
                                                                                                                                                                                                                                                                                                                                                               090748; PRELIMINARY;
090748; 01-NOV-1996 (TrEMBLrel. 0
01-NOV-1996 (TrEMBLrel. 0
01-JUN-2002 (TrEMBLrel. 2
                                                                    PRINTS; PRINTS;
                                                                                                                                                                                           Knight A.E., Kendrick-Jones J.;

A novel vertebrate myosin I.";

Submitted (FEB-1993) to the EMBL/GenBank/DDBJ

-!- SIMILARITY: CONTAINS 1 SH3 DOMAIN.
                                                                                                                                                                                                                                                                                                     Eukaryota; Metazoa; Chordata; C
Archosauria; Aves; Neognathae;
                                                                                             Pfam; PF00063; myosin_head; Pfam; PF00018; SH3; 1.
                                                                                                                    Pfam; PF00612; IQ;
                                                                                                                                            InterPro; IPR000048; IQ_region
InterPro; IPR001609; myosin_hea
                                                                                                                                                                     EMBL; X70400; CAA49850.1; -. HSSP; P08799; 1MND.
                                                                                                                                                                                                                                          TISSUE=INTESTINE;
                                                                                                                                                                                                                                                         SEQUENCE
                                                                                                                                                                                                                                                                              NCBI_TaxID=9031;
                                                                                                                                                                                                                                                                                                                                            CBBMIB.
                                                                                                                                                                                                                                                                                                                                                         Brush border
                                                                                                                                  InterPro; IPR001452;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                976
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        983
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               722
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       951
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               858
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       847
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               748
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      734
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              607
                                                                                                                                                                                                                                                                                                                                                                                                                                           9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      794
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TLGGKTRTIRVFDAENN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             \verb|HLRASLPQKIAAFEVLNNKKENWGYTRMWRGDYLSQQEELELPTTVSTYHDGIQALRQ---|
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ----LINAFRDV-RRMRDLGKSIRWPAPPLVLAQFVSRLRVMHQR---WRAATILARMPP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GVAVLVRHLGYKPEEYKMGRTKIFIRFPKTLFATEDSLEVRRQSLATKIQAAWRGFHWRQ 733
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TL---TKTALSADRVNN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CAESNGLFVIHVGDNDIVGCAKNTKNEERVGEMIGTLLAHYDKITMRRSPVLIQS-AVVC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SSLSDSLFVLHVQRED-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SHPFGKVLFSTYVQKFN-KFNKSSLRVLIVTDRFVAKLENKKFKLLKEPIPLQSISRISV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEP---IQYAVPVVKYDRKGYKPRPRQLLLTPSAVVIVEDAK---VKQRIDYANLTGISV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EWKQQLQQKAVASEIFKGKKDN------YPQSVPRLFISTRLGTEEISPRVLQSLG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RASFLLNLRRQLPRNVLDTS----WPTPPPALREASELLRELCMKNMVWKYCRSIS---P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RY - - -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KFLRVKRSAICIQSWWRGTLGRRKAAKRKWAAQTIRRLIRGFILRHSPRCPENAFFLDHV 793
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SCMQILESAGL-AQDCVQGRTKIFIRSPQTVFRLEELRTEQLPNVITFLQKMVRGVQQRE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LERVEHQVRYLGLLENVRVRRAGFAHRMPYDRFVNRYKLICASTWP----NPRRGQQLKD
                                                                                                                                                                                                                                                                                                                                 gallus
                                                                             PR00193; MYOSINHEAVY
PS50002;
                                                                                                                                                                                                                                                                                                                                                        myosin
                                                                                                                                                                                                                                                        N.A.
                                                                                                                                                                                                                                                                                                                                 (Chicken)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -----RRMLAVRKIIGAYRRYKLKSYIWQ
SH3;
                                                                                                                                                                                                                                                                                                       Chordata; Craniata; Vertebrata; Eute
Neognathae; Galliformes; Phasianidae;
                                                                                                                                                                                                                                                                                                                                                         IΒ.
                                                                                                                                myosin_head.
SH3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       996
                                                                                                                                                                                                                                                                                                                                                                   01,
01,
21,
                                                                                                                                                                                                                                                                                                                                                                 Created)
Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                    1099
                                                                                                                                                                                                                                                                                                                                                                                                                    A
                                                                                                                                                                                                         databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NKQKGDVVLQSDHVIE
                                                                                                                                                                                                                                                                                                                   Euteleostomi;
                                                                                                                                                                                                                                                                                                         Phasianinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     673
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      950
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      846
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              916
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               857
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               799
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               721
```

SS

```
Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SH3 domain.
SEQUENCE
              964
                                 778
                                                      917
                                                                           720
                                                                                               858
                                                                                                                  715
                                                                                                                                      798
                                                                                                                                                         705
                                                                                                                                                                            738
                                                                                                                                                                                                 656
                                                                                                                                                                                                                    678
                                                                                                                                                                                                                                        596
                                                                                                                                                                                                                                                           618
                                                                                                                                                                                                                                                                              536
                                                                                                                                                                                                                                                                                                   559
                                                                                                                                                                                                                                                                                                                        488
                                                                                                                                                                                                                                                                                                                                                               428
                                                                                                                                                                                                                                                                                                                                                                                  444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 137
                                                                                                                                                                                                                                                                                                                                                                                                      374
                                                                                                                                                                                                                                                                                                                                                                                                                                            315
                                                                                                                                                                                                                                                                                                                                           499
                                                                                                                                                                                                                                                                                                                                                                                                                         384
                                                                                                                                                                                                                                                                                                                                                                                                                                                               328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    256
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local.
IKRDFILTPKYFYLIGREKVKKGPEKGQIKEVLKKKVEIQAVSGVSLSTRQDDFFILH--
                                                                                  ASEIFKGKKDNYPQSVPRLFISTRLGTEEISPRVLQSLGS-EPIQYAVPVVKYDRKGYKP
                                                                                                                                                                                                          RPRQLLLTPSAVVIVEDAKV------
                                                                       ASSILYNEKERRRNSINKNEVGDYLGMEE-RPELRQFLAKRERIDFADSITKYDRR-FKP
                                                                                                                                 LLNLRRQLPRNVLDTSWPTPPPALREASELLRELCMKNMVWKYCRSISPEWKQQLQQKAV
                                                                                                                                                                                                                                   FDEVLIRHQVKYLGLMENLRVRRAGFAYRRKYEAFLQRYKSLCPETWPMWAGRPQDGVAV
                                                                                                                                                                                                                                                                           EYAFIRMLFPEKLDADKKGRPTTAGSKIKKQANDLVNTLMKCTPHYIRCIKPNETKKPRD
                                                                                                                                                                                                                                                                                             MNPIMAQCFDKSELSDKK-RPETVATQFKMSLLQLVEILRSKEPAYIRCIKPNDAKQPGR
                                                                                                                                                                                                                                                                                                                  GTHEHE -----NSWSSG-FVIHHYAGKVSYDVNGFCERNRDVLFTDLIELMQSS
                                                                                                                                                                                                                                                                                                                                                                                                 QKPYEEYS-----IGVLDIYGFEIFQKNGFEQFCINFVNEKLQQIFIELTLKAEQEEYV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VKRSAICIQSWWRGTLGRRKAAKRKWAAQTIRRLIRGFILRHSPRCPENAFFLDHVRASF
                                                                                                                                                                                             LLRSVNMDPDQYQMGRSKVFVKNPESLFLLEEMRERKFDGFARVIQKAW--
                                                                                                                                                                                                                                                                                                                               KPHPHFLTHKLADQKTRKSLDRGEFRLLHYAGEVTYSVTGFLDKNNDLLFRNLKETMCSS
                                                                                                                                                                                                                                                                                                                                                           QEGIKWTQIQYFNNKVVCDLIENKLNPPGIMSVLDDVCATMHATGEGADQTLLQKLQAAV
                                                                                                                                                                                                                                                                                                                                                                     AEGIAMEPVQYFNNKIICDLVEEKFK--GIISILDEECL---RPGEATDLTFFLEKLEDTV
                                                                                                                                                                                                                                                                                                                                                                                                             SKDAESPSWRSTTVLGLLDIYGFEVFQHNSFEQFCINYCNEKLQQLFIELTLKSEQEEYE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MRKALSVIDFTEDEVEDLLSIVASVLHLGNIHFAADEDSNAQVTTENQLKYLTRLLGVEG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GVQDFVLLENFTSEAAFIENLRRRFRENLIYTYIGPVLVSVNPYRDLQIYSRQHMERYRG
                                                                                                                                                                                                                                                                                                                                                                                                                                         DRLNDKITSRKMDSKWGGRSESITVTLNVEQAAYTRDALAKGLYARVFDFLVESINRAM-
                                                                                                                                                                                                                                                                                                                                                                                                                                                     TTLREALTHRKIIAK----GEELLSPLNLEQAAYARDALAKAVYSRTFTWLVRKINRSLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TMNAMQVIGIRGEDQQLVLQIVAGILHLGNISF-REEGNYARVENADSLAFPAYLLGIDR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VVSQNEHERNFHVYYQLIEGASQEQRQNLGI-MSPDYYYYLNQSDTYQVEGTDDRSDFLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VVHQNHGERNFHVFYQLLEGGEEETLRRLGLERNPQSYLYLVKGQCAKVSSINDKSDWKV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAQYENPPHIYALTDNMYRNMLIDGENQCVIISGESGAGKTVAAKYIMGYISKVSGGGDK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GVDDMVLLAKI-SEEAIVENLKKRFMDDYIFTYIGPVLISVNPFKQMPYFTDREIELYQG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1099
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  31.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                126207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       162; Mismatches 306; Indels 177;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                X
X
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 1719.5;
Pred. No. 1.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              824859049E14B071 CRC64;
                                                 KQRIDYANLTGISVSSLSDSLFVLHVQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1.1e-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  109;
                                                                                                               -----QMREE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1099;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
           1016
                                                                                                                                 857
                                                  963
                                                                       777
                                                                                           916
                                                                                                               719
                                                                                                                                                                         797
                                                                                                                                                                                                                                    655
                                                                                                                                                                                                                 737
                                                                                                                                                                                                                                                        677
                                                                                                                                                                                                                                                                                               617
                                                                                                                                                                                                                                                                                                                                                                               498
                                                                                                                                                     714
                                                                                                                                                                                            704
                                                                                                                                                                                                                                                                            595
                                                                                                                                                                                                                                                                                                                   535
                                                                                                                                                                                                                                                                                                                                      558
                                                                                                                                                                                                                                                                                                                                                            487
                                                                                                                                                                                                                                                                                                                                                                                                  427
                                                                                                                                                                                                                                                                                                                                                                                                                      443
                                                                                                                                                                                                                                                                                                                                                                                                                                          373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              76
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       22;
                  ρy
                                                         Qy
                                                                               рь
                                       Вþ
                                                                                                 Ωy
                                                                                                                     B
                                                                                                                                         Qγ
                                                                                                                                                              Ъ
                                                                                                                                                                                20
                                                                                                                                                                                                                                            RESULT
Q12965
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       836
```

Š

D

Ş

В

В

õ

D 04 D 04

ç.

84 g

B 8

5 da 65

gg Qg

```
Ър
                                                                                                                                                                                                                                                                                                               Query Match
Best Local S
Matches 398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   01-NOV-1996
01-NOV-1996
01-JUN-2002
                                                                                                                                                                                                                                                                                                                                                                                        PROSITE; PS
SH3 domain.
                                                                                                                                                                                                                                                                                                                                                                                                     Probom; PD000066; SH3; 1.
Probom; PD000355; myosin_head;
SMART; SM00242; MYSC; 1.
SMART; SM00326; SH3; 1.
PROSITE; PS50002; SH3; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Bement W.M.;
Submitted (SEP-1994) to the EMBL/GenBank/DDBJ
-!- SIMILARITY: CONTAINS 1 SH3 DOMAIN.
EMBL; U14391; AAA62667.1; -.
HSSP; P08799; 1MND.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE OF 1-245 FROM N.A.

MEDLINE-95018277; PubMed-7932763;

Bement W.M., Wirth J.A., Mooseker M.S.;

"Cloning and mRNA expression of human unconventional homologue of amoeboid myosins-I with a single IQ moti
                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pfam;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRINTS; PR00193; MYOSINHEAVY PRINTS; PR00452; SH3DOMAIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Myosin-IC.
Homo sapiens (Human)
                                                                   199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pfam;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              InterPro; IPR001609; myosin_head.
InterPro; IPR001452; SH3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            InterPro; IPR000048; IQ_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   J. Mol. Biol.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q12965;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Q12965
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1017 DFTSG-SELLITKAKNGHLAV
      258
                                    268
                                                                                                208
                                                                                                                              139
                                                                                                                                                             148
                                                                                                                                                                                           79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               893
                                                                                                                                                                                                                      88
                                                                                                                                                                                                                                                     20
                                                                                                                                                                                                                                                                                  28
                                                                                                                                                                                                                                                                                                                Local Similarity
les 398; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               10
                      MRKALSVIDFTEDEVEDLLSIVASVLHLGNIHFAADEDSNAQVTTENQLKYLTRLLGVEG
TLHAMNVIGIFAEEQTLVLQIVAGILHLGNISF-KEVGNYAAVESEEFLAFPAYLLGINQ
                                                                                                                        VVHQNHGERNFHVFYQLLEGGEEETLRRLGLERNPQSYLYLVKGQCAKVSSINDKSDWKV
                                                                                                                                                                                      GVDDWVLLSKIT-ENSIVENLKKRYMDDYIFTYIGSVLISVNPFKQMPYFGEKEIEMYQG
                                                                                                                                                                                                                                                               GVQDFVLLENFTSEAAFIENLRRRFRENLIYTYIGPVLVSVNPYRDLQIYSRQHMERYRG
                                                            VVMRNPGERSFHIFYQLIEGASAEQKHSLGI-TSMDYYYYLSLSGSYKVDDIDDRREFQE
                                                                                                                                                                                                      PF000612; IQ; 1.
PF00063; myosin_head; 1.
PF00018; SH3; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TFTRGQGDVAALKAGGKTLTV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EKDAYNFLESIFKTELVSLLCKRYEELTRSKL---RLNFQDTLQFRVKKEGWGGGGTRTV 892
                                                                                                                                                                                                                                                                                                                                                                            1109 AA; 127040 MW;
                                                                                                                                                                                                                                                                                                           31.8%; Score 1715; DB 4; ilarity 37.4%; Pred. No. 2.2e-109; Conservative 172; Mismatches 295;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Grembirel.
Grembirel.
Grembirel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 243:356-363(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Chordata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   01,
01,
21,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1036
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Created)
Last sequence update)
Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRT;
                                                                                                                                                                                                                                                                                                                                                                          0C1C74BAA3705905 CRC64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AΑ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      databases
                                                                                                                                                                                                                                                                                                                                        Length 1109;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              motif and an a
                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                               198;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SH3
                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                           198
                                                                                                                                                207
                              327
                                                            257
                                                                                             267
                                                                                                                                                                                      138
                                                                                                                                                                                                                                                  78
                                                                                                                                                                                                                                                                               87
                                                                                                                                                                                                                                                                                                             24;
```

В Š

```
RESULT OF STANDARD OF STANDARD
                                                                                                                                                                                                                                                                                                                                                                  08WWN7;
08WWN7;
01-MAR-2002
01-MAR-2002
01-JUN-2002
                                                                                                                                                                                                                                                                                                             Myosin-1F.
MYO1F.
                                                                                                                                                                                          AYOSI...
MYOIF.
Homo sapiens (Human).
'~~rvota; Metazoa; Chordata;
'~~rvota; Metazoa; Primates;
SEQUENCE FROM N.A.

MEDLINE-21664126; PubMed-11804589;

Krugmann S., Anderson K.E., Ridley S.H., Risso N., McGregor Coadwell J., Davidson K., Eguinoa A., Ellson C.D., Lipp P., Manifava M., Ktistakis N., Painter G., Thuring J.W., Cooper
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1010
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  678
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        618
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            559
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          490
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             430
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               798
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               738
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MNPIMAQCFDKSELSDKK-RPETVATQFKMSLLQLVEILRSKEPAYIRCIKPNDAKQPGR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PGRDGI----IDFTSG-SELLITKAKNGHLAV-VAPRL--NSR 1044
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KPHPHFLTHKLADQKTRKSLDRGEFRLLHYAGEVTYSVTGFLDKNNDLLFRNLKETMCSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SKDAESPSWRSTTVLGLLDIYGFEVFQHNSFEQFCINYCNEKLQQLFIELTLKSEQEEYE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PGVQGAGSRQVQFHQGFGDLAVLKPSNKVLQVSIGPGLPKNSR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REDNKQKGDVVLQSDHVIETLTKT---ALSADRVNNININQGSITFAG---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ASEIFKGKKDNYPQSVPRLFISTRLGTEEISPRVLQSLGS-EPIQYAVPVVKYDRKGYKP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LLNLRRQLPRNVLDTSWPTPPPALREASELLRELCMKNMVWKYCRSISPEWKQQLQQKAV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ELPFIKSLFPENLQADKKGRPTTAGSKIKKQANDLVSTLMKCTPHYIRCIKPNETKKPRD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              -----EYDSLLESVFKTEFLSLLAKRYEEKTQKQLPLKFSNTLELKLKKENWG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VKRDLLLTPKCLYLIGREKVKQGPDKGLVKEVLKRKIEIERILSVSLSTMQDDIFILHEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RPRQLLLTPSAVVIVEDAKVKQ------RIDYANLTGISVSSLSDSLFVLHVQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              -----LNKKERRRNSINRNFIGDYIGMEE-HPELQQFVGKREKIDFADTVTKYDRR-FKG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VKRSAICIQSWWRGTLGRRKAAKRKWAAQTIRRLIRGFILRHSPRCPENAFFLDHVRASF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          QEGIRWTPIEYFNNKIVCDLIENKVNPPGIMSILDDVCATMHAVGEGADQTLLQKLQMQI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EKDHEEYN-----IGVLDIYGFEIFQKNGFEQFCINFVNEKLQQIFIELTLKAEQEEYV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DRLKEKLTSROMDSKWGGKSESIHVTLNVEQACYTRDALAKALHARVFDFLVDSINKAM-
                                                                                                                                                                                                                                                                                                                                                                     (TrEMBLrel.)
(TrEMBLrel.)
(TrEMBLrel.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -----NSWNQG-FIIHHYAGKVSYDMDGFCERNRDVLFMDLIELMQSS
                                                                                                                                                                                                                                                                                                                                                                     20,
20,
21,
                                                                                                                                                                                                                                                                                                                                                                  Created)
Last sequence up
Last annotation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ·EEASDLL---
                                                                                                                                                                                                                      Craniata; V
Catarrhini;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1098
                                                                                                                                                                                                                                                  Vertebrata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AΑ
                                                                                                                                                                                                                                                                                                                                                                  update)
on update)
                                                                                                                                                                                                                      Hominidae;
                                                                                                                                                                                                                                                  Euteleostomi;
         Cooper M.A.
                                                                                                                                                                                                                         HOMO
                                                              Α.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            င်
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1009
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          489
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       839
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  963
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            797
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             657
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       537
```

20

ДЬ

д 99

g 99

Ş Ъ δõ Db Qy 밁 Qy ₽ Ωy В Ş В δÃ Дb δ В õ

DЬ

```
Дb
                   γQ
                                                 Вb
                                                                        δÃ
                                                                                                  밁
                                                                                                                       ρ
                                                                                                                                                                        Qy
                                                                                                                                                                                                                        Qy
                                                                                                                                                                                                                                                                           Q
                                                                                                                                                                                                                                                                                                                            Qy
                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                             QY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ъ
                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                      멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                         B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRINTS: PR00929; ATHOOK.
PRINTS: PR00193; MYOSINHEAVY.
PRINTS: PR00452; SH3DMAIN.
ProDom; PD000066; SH3; 1.
ProDom; PD000355; myosin_head; 1
SMART; SM00326; MYSC; 1.
SMART; SM00326; SH3; 1.
PROSITE; PS50002; SH3; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Myosin.
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pfam; PF00612; IQ; 1.
Pfam; PF00063; myosin_head;
Pfam; PF00018; SH3; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          InterPro; IPR000637; AT_hook.
InterPro; IPR000048; IQ_region.
InterPro; IPR001609; myosin_head.
InterPro; IPR001452; SH3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   and Rho GTPases,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EMBL; AJ310570; CAC83948.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       matrices."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Hawkins P.T.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Lim Z.-Y., Holmes A.B., Dove S.K., Michell R.H., Grewal A.,
Nazarian A., Erdjument-Bromage H., Tempst P., Stephens L.R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mol. Cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            "Identification of ARAP3, a novel PI3K effector regulating both
 595
                        617
                                                   535
                                                                                                   487
                                                                                                                           498
                                                                                                                                                  427
                                                                                                                                                                                                    374
                                                                                                                                                                                                                             383
                                                                                                                                                                                                                                                      314
                                                                                                                                                                                                                                                                             327
                                                                                                                                                                                                                                                                                                      256
                                                                                                                                                                                                                                                                                                                              268
                                                                                                                                                                                                                                                                                                                                                        197
                                                                                                                                                                                                                                                                                                                                                                                 208
                                                                                                                                                                                                                                                                                                                                                                                                          137
                                                                                                                                                                                                                                                                                                                                                                                                                                 148
                                                                                                                                                                                                                                                                                                                                                                                                                                                          77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  28
                                                                                                                                                MRKALSVIDFTEDEVEDLLSIVASVLHLGNIHFAADEDSN-AQVTTENQLKYLTRLLGVE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GVQDFVLLENFTSEAAFIENLRRRFRENLIYTYIGPVLVSVNPYRDLQIYSRQHMERYRG
              RFDEVLIRHQVKYLGLMENLRVRRAGFAYRRKYEAFLQRYKSLCPETWPMWAGRPQDGVA
                                                                                                                VKPHPHFLTHKLADQKTRKSLDRGEFRLLHYAGEVTYSVTGFLDKNNDLLFRNLKETMCS
                                                                                                                                                                                                                                                                GTTLREALTHRKIIA----KGEELLSPLNLEQAAYARDALAKAVYSRTETWLVRKINRSL
                                                                                                                                                                                                                                                                                                                                                                  VVHQNHGERNFHVFYQLLEGGEEETLRRLGLERNPQSYLYLVKGQCAKVSSINDKSDWKV
                                                                                                                                                                                                                                                                                                                                                                                                                     GGAVRDRLLQSNPVLEAFGNAKTLRNDNSSRFGKYMDVQFDFKGAPVGGHILSYLLEKSR
                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAQYENPPHIYALTDNMYRNMLIDCENQCVIISGESGAGKTVAAKYIMGYISKVSGGGEK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GVDDMVLLPQIT-EDAIAANLRKREMDDYIFTYIGSVLISVNPFKQMPYFTDREIDLYQG
DWEENRVKHQVEYLGLKENIRVRRAGFAYRRQFAKFLQRYAILTPETWPRWRGDERQGVQ
                                               SEQAFLRMLFPEKLDGDKKGRPSTAGSKIKKQANDLVATLMRCTPHYIRCIKPNETKHAR
                                                              SMNPIMAQCFDKSELSDKK-RPETVATQFKMSLLQLVEILRSKEPAYIRCIKPNDAKQPG
                                                                                                                                                                                                                                                   SGRLQEKLTSRKMDSRWGGRSESINVTLNVEQAAYTRDALAKGLYARLFDFLVEAINRAM
                                                                                                                                                                                                                                                                                                     TLSAMQVIGIPPSIQQLVLQLVAGILHLGNISFC--EDGNYARVESVDLLAFPAYLLGID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           400;
                                                                                                                                                                                                                                                                                                                                                       VVMQNENERNFHIYYQLLEGASQEQRQNLGL-MTPDYYYYLNQSDTYQVDGTDDRSDFGE
                                                                                                                                                                                                                                                                                                                                                                                                        VQHVKDIILQSNPLLEAFGNAKTVRNNNSSRFGKYFEIQFSRGGEPDGGKISNFLLEKSR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9:95-108(2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1098 AA; 124803 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative 152;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 by selective
                                                                                               -----NSWSAG-FVIHHYAGKVSYDVSGFCERNRDVLFSDLIELMQT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     31.8%; Score 1714.5; 38.1%; Pred. No. 2.36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 capture on
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           B7FC1D3371C421B8 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 phosphoinositide affinity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3e-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           304;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      L.R.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ,;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           193;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1098
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  147
                                                                                                                                                  486
                                                                                                                                                                           497
                                                                                                                                                                                                                          442
                                                                                                                                                                                                                                                                                                                              326
                                                                                                                                                                                                                                                                                                                                                                                                                                                          136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         76
                                                                         616
                                                                                                                        557
                                                                                                                                                                                                                                                                                                                                                                                                                                207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 87
                                                                                                                                                                                                                                                   373
                                                                                                                                                                                                                                                                            382
                                                                                                                                                                                                                                                                                                                                                       255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           23;
```

```
RESULT
OF AC OF AC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δ
       Query Match
Best Local S
Matches 395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            дd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   õ
                                                                                                                                                                                                                  Pfam; PF00063; myosin_head; 1.
Pfam; PF00018; SH3; 1.
PRINTS; PR00193; MYOSINHEAVY.
PRINTS; PR00452; SH3DOMAIN.
ProDom; PD000066; SH3; 1.
ProDom; PD000355; myosin_head; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     063356; PRELIMINARY;
063356; OI-NOV-1996 (TrEMBLrel. 01, C
01-NOV-1996 (TrEMBLrel. 01, L
01-JUN-2002 (TrEMBLrel. 21, L
Myosin I heavy chain.
MYR3.
                                                                                                                                                 SMART; SM00242; MYSC; 1.
SMART; SM00326; SH3; 1.
PROSITE; PS50002; SH3; 1.
                                                                                                                                                                                                                                                                                                                                                                           Pfam; PF00612; IQ; 1
                                                                                                                                                                                                                                                                                                                                                                                                InterPro; IPR000048; IQ_region.
InterPro; IPR001609; myosin_head
InterPro; IPR001452; SH3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Rattus norvegicus (Rat).
Eukaryota; Metazoa; Chordata;
Mammalla; Eutheria; Rodentia;
NCBI_TaxID=10116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           J. Cell Biol. 129:819-830(1995).

- SIMILARITY: CONTAINS 1 SH3 DOMAIN.
EMBL; X74815; CAS2815.1; -.
HSSP; P08799; IMND.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Stoeffler H.E., Ruppert C., Reinhard J., Bahler M.;
"A novel mammallan myosin I from rat with an SH3 domain localizes
"On A-inducible, F-actin-rich structures at cell-cell contacts.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STRAIN-SPRAGUE-DAWLEY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDLINE-95247829; PubMed-7730414;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                885
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              835
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 777
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              714
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             797
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     12
                                                                                                                               domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            QREDNKQKGDVVLQSDHVIETLTKT---ALSADRVNNININQGSITFA------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGGGTRSVTFSRGFGDLAVLKVGGRTLTV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGPGRDGIIDFTSGSELLITKAKNGHLAV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PIKRDLILTPKCVYVIGREKMKKGPEKGQVCEVLKKKVDIQALRGVSLSTRQDDFFIL--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRPRQLLLTPSAVVIVEDAK------VKQRIDYANLTGISVSSLSDSLFVLHV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FLLNLRRQLPRNVLDTSWPTPPPALREASELLRELCMKNMVWKYCRSISPEWKQQLQQKA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               HLLRAVNMEPDQYQMGSTKVFVKNPESLFLLEEVRERKFDGFARTIQKAW------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RVKRSAICIOSWWRGTLGRRKAAKRKWAAQTIRRLIRGFILRHSPRCPENAFFLDHVRAS
                            Similarity
                                                                                                       1107
       Conservative
                                                                                                       AΑ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AADSFLESVEKTEFVSLLCKRFEEATRRPLPLTFSDTLQFRVKKEGW
31.7%; Score 1712.5;
37.2%; Pred. No. 3.3e
Live 175; Mismatches
                                                                                                     126826
                                                                                                     MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Rat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRT;
                                                                                             B9D8FBB0CE047148 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EEMRE -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         913
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1036
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1107
                         .3e-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ⋛
                                         DB_11; Length 1107;
Indels 197;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Murinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Rattus
Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ťo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1007
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 834
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  713
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                796
23;
```

3

```
Ъ
                        200
                                                                        δÃ
                                                                                                  Вþ
                                                                                                                                                  DЬ
                                                                                                                        204
                                                                                                                                                                          γ
                                                                                                                                                                                                                         Q
                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                    а
                                                                                                                                                                                                                                                                          QΨ
                                                                                                                                                                                                                                                                                                                         Ωy
                                                                                                                                                                                                                                                                                                   Ъ
                                                                                                                                                                                                                                                                                                                                                   Ъ
                                                                                                                                                                                                                                                                                                                                                                         Qy
                                                                                                                                                                                                                                                                                                                                                                                                  DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                        QY
                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        γ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Qy
                           1010
                                                   840
                                                                           964
                                                                                                                                                  722
                                                                                                                                                                           858
                                                                                                                                                                                                    722
                                                                                                                                                                                                                           798
                                                                                                                                                                                                                                                                           738
                                                                                                                                                                                                                                                                                                    658
                                                                                                                                                                                                                                                                                                                                                    598
                                                                                                                                                                                                                                                                                                                                                                                                                                                    490
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   430
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       28
                           P---
                                                                                                                                                                                                                                                                                                                                            REDNKQKGDVVLQSDHVIETLTKT---ALSADRVNNININQGSITFAG-----
                                                                                            VKRDLLLTPKCLYLIGREKVKQGPDKGLVKEVLKRKIEVERILSVSLSTMQDDIFILHEQ
                                                                                                                                             ASDLLLNKKERRRNSINRNFIGDYIGMEE-HPELQQFVGKREKIDFADIVTKYDRR-FKG
                                                                                                                                                                                                                                                                   VKRSAICTQSWWRGTLGRRKAAKRKWAAQTIRRLIRGFILRHSPRCPENAFFLDHVRASF
                                                                                                                                                                                                                                                                                            LLQSVNMDSDQFQLGRSKVFIKAPESLFLLEEMRERKYDGYARVIQKTWRKFVARKKYVQ
                                                                                                                                                                                                                                                                                                                                                                                                            MNPIMAQCFDKSELSDKK-RPETVATQFKMSLLQLVEILRSKEPAYIRCIKPNDAKQPGR
PWSAGGSRQVQFYQGFGDLAILKPSNKVLQVSIGPGLPKNAR
                                                                                                                                                          ASEIFKGKKDNYPQSVPRLFISTRLGTEEISPRVLQSLGS-EPIQYAVPVVKYDRKGYKP
                                                                                                                                                                                                                   LLNLRRQLPRNVLDTSWPTPPPALREASELLRELCMKNMVWKYCRSISPEWKQQLQQKAV
                                                                                                                                                                                                                                                                                                                    LVRHLGYKPEEYKMGRTKIFIREPKTLFATEDSLEVRRQSLATKIQAAWRGEHWRQKFLR 737
                                                                                                                                                                                                                                                                                                                                                                                            ELPFIKSLFPENLQADKKGRPTTAGSKIKKQANDLVSTLMKCTPHYIRCIKPNETKKPKD
                                                                                                                                                                                                                                                                                                                                                                                                                                                            KPHPHFLTHKLADQKTRKSLDRGEFRLLHYAGEVTYSVTGFLDKNNDLLFRNLKETMCSS
                                                                                                                        RPRQLLLTPSAVVIVEDAKVKQ-----
                                                                                                                                                                                                                                                                                                                                                                                                                                            GSHEHF-----NSWNQG-FIIHHYAGKVSYDMDGFCERNRDVLFMDLIELMQSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AEGIAWEPVQYFNNKIICDLVEEKFK--GIISILDEECL---RPGEATDLTFLEKLEDTV 498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EKDHEEYN-----IGVLDIYGFEIFQKNGFEQFCINFVNEKLQQIFIELTLKAEQEEYV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SKDAESPSWRSTTVLGLLDIYGFEVFQHNSFEQFCINYCNEKLQQLFIELTLKSEQEEYE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TTLREALTHRKIIA----KGEELLSPLNLEQAAYARDALAKAVYSRTFTWLVRKINRSLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DRLKEKLTSRQMDSKWGGKSESIHVTLNVEQACYTRDALAKALHARVFDFLVDSINKAM-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TLHAMNVIGIFSEEQTLVLQIVAGILHLGNINF-KEVGNYAAVESEEFLAFPAYLLGINQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MRKALSVIDFTEDEVEDLLSIVASVLHLGNIHFAADEDSNAQVTTENQLKYLTRLLGVEG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VVMRNPGERSFHIFYQLIEGASPEQKQSLGI-TSMDYYYYLSLSGSYKVDDIDDKRDFQE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VVHQNHGERNFHVFYQLLEGGEEETLRRLGLERNPQSYLYLVKGQCAKVSSINDKSDWKV 267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAQYENPPHIYALADSMYRNMIIDRENQCVIISGESGAGKTVAAKYIMSYVSRVSGGGPK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GVDDMVLLSKIT-ESSIVENLKKRYMDDYIFTYIGSVLISVNPFKQMPYFGEKEIEMYQG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GVQDFVLLENFTSEAAFIENLRRRFRENLIYTYIGPVLVSVNPYRDLQIYSRQHMERYRG
                      -GRDGIIDFTSG-SELLITKAKNGHLAV-VAPRL--NSR
                                                                                                                      -RIDYANLTGISVSSLSDSLFVLHVQ
                       1044
                                                                      -----G
                                                                      1009
                                                                                             839
                                                                                                                                              779
                                                                                                                                                                                                                      857
                                                                                                                                                                                                                                                                     797
                                                                                                                                                                                                                                                                                                                                                                      677
                                                                                                                                                                                             721
                                                                                                                                                                                                                                             721
                                                                                                                                                                                                                                                                                            717
                                                                                                                                                                                                                                                                                                                                              657
                                                                                                                                                                                                                                                                                                                                                                                               597
                                                                                                                                                                                                                                                                                                                                                                                                                     617
                                                                                                                                                                                                                                                                                                                                                                                                                                              537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     558
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              489
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           375
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             316
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   207
```

```
Q9NGLT 13
Q9NGLT 10
Q9NGLD 01-QC
DT 01-QC
DT 01-DC
DT 01-
                                                                                                                                                                          В
                                                                                                                                                                                                                      Q
                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                     Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DЪ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ρy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                          S
                                                                           В
                                                                                                                Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local S
Matches 400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q9NGL7;
Q9NGL7;
01-OCT-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Amoeboid myosin I (Fragment).
Strongylocentrotus purpuratus (Purple sea urchin).
Eukaryota; Metazoa; Echinodermata; Eleutherozoa; Echinozoa;
Echinoidea; Euechinoidea; Echinocea; Echinoida; Strongylocentrotudae;
Strongylocentrotus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pfam; PF00063; myosin_head; 1.
PRINTS; PR00193; MYOSINHEAVY.
ProDom; PD000355; myosin_head;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        "Characterization of sea urchin unconventional myosins a their patterns of expression during early embryogenesis. Mol. Reprod. Dev 57:111-126(2000).
EMBL; AF248488; AAF71717.1; -.
HSSP; P08799; 1MND.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SMART; SM00242; MYSc; NON_TER 1053 105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
MEDLINE=20440049; PubMed=10984411;
Sirotkin V., Seipel S., Krendel M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NCBI_TaxID=7668;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   01-OCT-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   InterPro;
                            552
                                                                              476
                                                                                                                             492
                                                                                                                                                                               416
                                                                                                                                                                                                                              436
                                                                                                                                                                                                                                                                                                                                 376
                                                                                                                                                                                                                                                                                                                                                                                303
                                                                                                                                                                                                                                                                                                                                                                                                                                  320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       144
                                                                                                                                                                                                                                                                                  363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        84
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RDRVGVQDFVLLENFTSEAAFIENLRRRFRENLIYTYIGPVLVSVNPYRDLQIYSRQHME 83
                                                                                                                                                                                                      KSEQEEYEAEGIAWEPVQYFNNKIICDLYEEKF-KGIISILDEECL----RPGEATDLTFL 491
                                                                                                                                                                                                                                                                                                       RKINRSLASKDAESPSWRSTTVLGLLDIYGFEVFQHNSFEQFCINYCNEKLQQLFIELTL 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                --SGGGATVQHVKEVIIQSNPLLEAFGNAKTVRNNNSSRFGKYVEIQFTRAGAPDGGKIT 184
                                                                           QKMNSAVGTHQHY - - - - - - - -
                                                                                                                                                                                                                                                                          SSINGAMQKQKVE-----ITIGVLDIYGFEIFQQNGFEQFCINFVNEKLQQIFIELTL
                                                                                                                                                                                                                                                                                                                                                                                SYLLGLDKEALRKKLISRRMDSKWGGKAEHIEVTLNTEQAAHTRDALAKAVHSRLFDFLV
                                                                                                                                                                                                                                                                                                                                                                                                                                TRLLGVEGTTLREALTHRKIIA-----KGEELLSPLNLEQAAYARDALAKAVYSRTFTWLV 375
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DDVKEYKDTLNAMSVIGISEDDQENVLSCVAGILHLGNIVF-VEKDNYAVIHDDEFLDFP 302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NDKSDWKVMRKALSVIDFTEDEVEDLLSIVASVLHLGNIHFAADEDSNAQVTTENQLKYL 319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NFLLEKSRVVSQNTDERNFHIFYQLLCGANHQQKENLGL-TTPDYYFYLNQSGSYKVDGL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APERGGA----VRDRLLQSNPVLEAFGNAKTLRNDNSSRFGKYMDVQFDFKGAPVGGHIL 199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RKTSGVEDMVLLSKI-QEGAIVENLKKRFMDDLIYTYIGPVLISINPFKQMPYFTEKEVD
                          KETMCSSMNPIMAQCF-DKSELSDKKRPETVATQFKMSLLQLVEILRSKEPAYIRCIKPN
                                                                                                                          EKLEDTVKPHPHFLTHKLADQKTRKSLDRGEFRLLHYAGEVTYSVTGFLDKNNDLLFRNL 551
                                                                                                                                                                          KAEQEEYVAEGIKWKKIDYFNNKIVCDLIESKVPPGVMCILDDVCATMHAVSDGADEKLL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             al Similarity
400; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              IPR001609; myosin_head.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1053 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (TrEMBLrel. 15, Created)
(TrEMBLrel. 15, Last sequence up)
(TrEMBLrel. 19, Last annotation)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1053
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               31.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              119723
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             '.-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             171; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MW.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 1695;
Pred. No. 4
                                                                           -GVLSGGFIVHHYAGQVRYTVEGFCERNRDVLFTDL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                M., Bonder E.M.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0B31468B9F9FD03C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1053
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AΑ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9e-108;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             291;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    update)
=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      myosins and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 1053;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             208;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           analysis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 259
                                                                                                                                                                                                                                                                             415
                                                                                                                                                                            475
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          68
                                                                           523
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             24;
```

```
RESULT 14
061080
δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        γQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ρy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                     "Analysis of the regulatory phosphorylation site in myosin IC by using site-directed mutagenesis."; Proc. Natl Acad Sci. U.S.A. 95:15200-15205(1998).
-!- SIMILARITY: CONTAINS 1 SH3 DOMAIN.
EMBL; AF051353; AAC98089.1; -.
HSSP: P08799; IMND.
       PRINTS; PR00193; MYOSINHEAVY.
PRINTS; PR00452; SH3DOMAIN.
ProDom; PD000066; SH3; 1.
ProDom; PD000355; myosin_head; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-AUG-1998 (TrEMBLrel.
01-AUG-1998 (TrEMBLrel.
01-MAR-2002 (TrEMBLrel.
                                                                                                                                                                                                                                                                              Jung G., Korn E.D., Hammer J.A. III;
"The heavy chain of Acanthameda myosin IB is a fusion and non-myosin-11ke sequences.";
Proc. Natl. Acad. Sci. U.S.A. 84:6720-6724(1987).
                                                                                                                                                                                                                                                                                                                                                                                                                              MICHC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1003
SMART;
                                                                      Pfam; PF00063; myosin_head; Pfam; PF00018; SH3; 1.
                                                                                                 InterPro; IPR001609; myosin_head.
InterPro; IPR001452; SH3.
                                                                                                                                                                                                                                   SEQUENCE FROM N.A. MEDLINE-99079990;
                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A. MEDLINE=88016163; PubMed=3477803;
                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota;
                                                                                                                                                                                                                                                                                                                                                                                                             Acanthamoeba castellanii (Amoeba)
                                                                                                                                                                                                                                                                                                                                                                                                                                          Myosin IC heavy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    061080;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     061080
                                                                                                                                                                                                                                                                                                                                                                                  NCBI_TaxID=5755;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             879
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       824
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           908
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        715
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      851
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             791
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     731
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DSLFVLHVQREDNKQKGDVVLQSDHVIETLT----KTALSADRVNNININQG-------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WRQKFLRVKRSAICIQSWWRGTLGRRKAAKRKWAAQTIRRLIRGFILRHSPRCPENAFFL 790
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DAKQPGRFDEVLIRHQVKYLGLMENLRVRRAGFAYRRKYEAFLQRYKSLCPETWPMWAGR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GWGGGGTRTVRFAQGQGDTAIL--KPSSKILTVSIGSG-----LPR-NSR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DDMFVLHVSEE----YDSILESTFKTEFLTVLNKKFQETLQQKLMVNFNDSIEFSVKKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KYDRR-FKVTKRDLLLSGRNIYLIGREQIKKGPEKGQIRDVVKRKIPLNHIHSVSLSTLQ 823
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KYDRKGYKPRPRQLLLTPSAVVIV -- EDAK-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  QLQQKAVASEIFKGKKDNYPQSVPRLFISTRLGTE-EISPRVLQSLGS--EPIQYAVPVV 907
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DHVRASFLLNLRRQLPRNVLDTSWPTPPPALREASELLRELCMKNMVWKYCRSISPEWKQ 850
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AQKYYLRLKQQ------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VKSGVNHLLRAVNMDTDEFQLGKTKVFIRKPESLFLLEEQRERKFDFHARIIQKAFRQFN 703
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PQDGVAVLVRHLGYKPEEYKMGRTKIFIRFPKTLFATEDSLEVRRQSLATKIQAAWRGFH 730
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ETKRPQDWEEKRVYHQVEYLGLKENIRVRRAGFAYRREFDKFLRRYAILTPETWPRWGGD 643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      IELMQSSENSFFMTLFPEKIAGQAKSRPTTASSKIKTQANKLVDKLMQCTPHYIRCIKPN
SM00242; MYSc;
                                                                                                                                                                                                                                                                                                                                                                                               Acanthamoebidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -ASDILFDKKERRRYSLNRNFVGDYIGFEHNVS----LQALVARRERIEFADKVN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SITFAGGPGRDGIIDFTSGSELLITKAKNGHLAVVAPRLNSR
                                                                                                                                                                                                                                                                                                                                                                                                                                                          07,
07,
20,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Created)
Last sequ
                                                                                                                                                                                                                                                                                                                                                                                                 Acanthamoeba.
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       sequence update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AΑ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VKQRIDYANLTGISVSSLS
                                                                                                                                                                                                                      J.A.
                                                                                                                                                                                                        Acanthamoeba
                                                                                                                                                                                                                                                                                                           of myosin-like
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1044
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         670
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           954
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 714
```

```
S
                                                          В
                                                                                 Ş
                                                                                                              В
                                                                                                                                     Ş
                                                                                                                                                                B
                                                                                                                                                                                                                    В
                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                õ
                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                  õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   엉
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ő
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SORR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local
774 SKVERRIMVLTSNAMFLVAIDPNKDKIEKKVKPFLYVLKRRIDFNKIGSITLSPLQDNFM
                                914
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SH3 domai
                                                          733
                                                                                    856
                                                                                                              727
                                                                                                                                                                                                                    648
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SMART; SM00326; SH3; 1. PROSITE; PS50002; SH3;
                                                                                                                                        796
                                                                                                                                                                  708
                                                                                                                                                                                           736
                                                                                                                                                                                                                                              677
                                                                                                                                                                                                                                                                      588
                                                                                                                                                                                                                                                                                               617
                                                                                                                                                                                                                                                                                                                         528
                                                                                                                                                                                                                                                                                                                                                   559
                                                                                                                                                                                                                                                                                                                                                                           478
                                                                                                                                                                                                                                                                                                                                                                                                    499
                                                                                                                                                                                                                                                                                                                                                                                                                             419
                                                                                                                                                                                                                                                                                                                                                                                                                                                      440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8
                        YKPRPRQLLLTPSAVVIVE------DAKV-----KQRIDYANLTGISVSSLSDSLF
                                                                          AVASEIFKGKKDNYPQSVPRLFISTRLGTEEISPRVLQSLGSEPIQYAVPVVKYDRK--G
                                                  -----FKTDYINYRQNFK---LKDCIGDK-----GTEKVLFADLCNNLDKSFWG
                                                                                                            ---LSLERP-
                                                                                                                                SFLLNLRRQLPRNVLDTSWPTPPPALREASELLRELCMKNMVWKYCRSISPEWKQQLQQK
                                                                                                                                                           YEVKKGG-----NDALVNKKERRR------
                                                                                                                                                                                  LRVKRSAICIQSWWRGTLGRRKAAKRKWAAQTIRRLIRGFILRHSPRCPENAFFLDHVRA 795
                                                                                                                                                                                                            AILNHVGMSLGKEYQKGKTKIFIRQPESVFSLEELRDRTVFSYANKIQRFLRKTAMRKYY
                                                                                                                                                                                                                            VLVRHLGYK-PEEYKMGRTKIFIRFPKTLFATEDSLEVRRQSLATKIQAAWRGFHWRQKF 735
                                                                                                                                                                                                                                                                DENNSLVLHQVKYLGLLENVRIRRAGYAYRQVYDKFFYRYRVVCPKTWSGWNGDMVSGAE
                                                                                                                                                                                                                                                                              RFDEVLIRHQVKYLGLMENLRVRRAGFAYRRKYEAFLQRYKSLCPETWPMWAGRPQDGVA 676
                                                                                                                                                                                                                                                                                                                  SSTFFAGLFPEAKEVATSKKKPTTAGFKIKESINILVATLSKCTPHYIRCIKPNEKKAAN
                                                                                                                                                                                                                                                                                                                                        MNPIMAQCFD--KSELSDKKRPETVATQFKMSLLQLVEILRSKEPAYIRCIKPNDAKQPG
                                                                                                                                                                                                                                                                                                                                                                   PTHAHLAATSQPD-----EFVIKHYAGDVVYNVDGFCDKNKDLLFKDLIGLAECT
                                                                                                                                                                                                                                                                                                                                                                                 KPHPHFLTHKLADOKTRKSLDRGEFRLLHYAGEVTYSVTGFLDKNNDLLFRNLKETMCSS
                                                                                                                                                                                                                                                                                                                                                                                                                                       EEYEAEGIAWEPVQYFNNKIICDLVEEKF-KGIISILDEECLRPGEATDLTFLEKLEDTV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DAMYIDDPEA-----LTTGILDFYGFEIFGKNGFEQLCINFVNEKLQQIFIQLTLKAEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RSLASKDAESPSWRSTTVLGLLDIYGFEVFQHNSFEQFCINYCNEKLQQLFIELTLKSEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           domain.
                                                                                                                                                                                                                                                                                                                                                                                                                     EEYGAEGIQWENIDYFNNKICCDLIEEKRPPGLMTILDDVCNFP-KGTDDKFREKLLGAF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PVAVEQALLYR-TITTGEQGRGRSSVYSCPQDPLGAIYSRDALSKALYSRMEDYIIQRVN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DVMRVKDVILESNPLLEAFGNAKTIRNNNSSRFGKYMEIQFDLKGDPVGGRISNYLLEKS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DTWNAMKVIGETABEQHEIFRLVTAILYLGNVQFVDDGKGGSTIADRQVVEMLAYLMRTE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VMRKALSVIDFTEDEVEDLLSIVASVLHLGNIHFAADEDSNAQVTTENQLKYLTRLLGVE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RVVYQTNGERNFHIFYQLLAGAPADLRQEFGLQ-TPDYYFYLNQGKTYTVDGMDDNQEFQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GVQDFVLLENFTSEAAFIENLRRRFRENLLYTYIGPVLVSVNPYRDL-QIYSRQHMERYR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RVVHQNHGERNFHVFYQLLEGGEEETLRRLGLERNPQSYLVLVKGQCAKVSSINDKSDWK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RGGAVRDRLLQSNPVLEAFGNAKTLRNDNSSRFGKYMDVQFDFKGAPVGGHILSYLLEKS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GKYRYELPPHVYALADDMYRTMLSESEDQCVIISGESGAGKTEASKKIMQYIAAVSGATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GVSFYEVPPHILFAVADIVYRALRTERRDQAVMISGESGAGKTEATKRLLQFYAETCPAPE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GVDDMVMLTSISND-AINDNLKKRFAADLIYTYIGHVLISVNPYKQINNLYTERTLKDYR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            al Similarity
373; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1186 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      29.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             129459
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       165; Mismatches 304; Indels 207;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 1573.5;
Pred. No. 1.4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           E37AD44A685803A6 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       .4e-99;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
  833
                                                                                                                                                                                                             707
                                                   773
                                                                                                                                                         726
                                                                                                                                                                                                                                                                647
                                                                                                                                                                                                                                                                                                                                            616
                                                                                                                                                                                                                                                                                                                                                                    527
                                                                                                                                                                                                                                                                                                                                                                                                                     477
                                                                                                                                                                                                                                                                                                                                                                                                                                               498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                439
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           206
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        23;
```

```
RESOLT
OLD POLY
OLD P
              g
                                                        20
                                                                                                      Ъ
                                                                                                                                                δÃ
                                                                                                                                                                                                   Ъ
                                                                                                                                                                                                                                           Qy
                                                                                                                                                                                                                                                                                              B
                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Qy
                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pfam; PF00063; myosin_head; 1.
pfam; PF00018; SH3; 1.
PRINTS; PR00019; MYOSINHEAVY.
ProDom; PD000066; SH3; 1.
ProDom; PD000355; myosin_head;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Q19901;
Q19901;
01-NOV-1996
              193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SH3 domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PROSITE; PS50002; SH3; 1.
PROSITE; PS00639; THIOL_PROTEASE_HIS; UNKNOWN_1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SMART; SM00242; MYSC; 1
SMART; SM00326; SH3; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        InterPro; IPR001452;
InterPro; IPR000169;
Pfam; PF00612; IQ; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Science 282:2012-2018(1998).

-- SIMILARITY: CONTAINS 1 SH3 DOMAIN.

EMBL; 275952; CAB00095.1; --

HSSP: P08799; 1MND.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ul-NOV-1996 (TrEMBLrel. 01-NOV-1996 (TrEMBLrel. 01-JUN-2002 (TrEMBLrel. F29D10.4 protein.
                                                                                                      133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Submitted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota; Metazoa; Nemata
Rhabditidae; Peloderinae;
                                                          207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             InterPro; IPR000048; InterPro; IPR001609;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       none;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE=99069613;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          White S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Caenorhabditis elegans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NCBI_TaxID=6239;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          F29D10.4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         investigating biology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Genome sequence of the nematode C.elegans: A platform
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1005 TFAGG------PGRDGIIDFTSGS
                                                                                                                                                                                                   73
                                                                                                                                                                                                                                                87
                                                                                                                                                                                                                                                                                                             27 VGVODFVLLENFTSEAAFIENLRRRFRENLIYTYIGPVLVSVNPYRDLQIYSRQHWERYR 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               875
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         834
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          959 VLHVQREDNKQKGDVVLQSDHVIETLTKTAL---
RVVHQNEGDRNFHVFYQLCAGADKNLRSTFGI-GELQYYNYLNMSGVFKADDTDDGKEFE
                                            RVVHQNHGERNFHVFYQLLEGGEEETLRRLGLERNPQSYLYLVKGQCAKVSSINDKSDWK 266
                                                                                                                                                                                                                                   GVSFYEVPPHLFAVADTVYRALRTERRDQAVMISGESGAGKTEATKRLLQFYAETCPAPE 146
                                                                                             KVQHIKDVILQSNPLLEAFGNSATVRNWNSSRFGKYVEIVFSRGGEPIGGKLSNFLLEKS
                                                                                                                                                                                     GAAQYENAPHIYALADNMYRNMLIDNESQCVIISGESGAGKTVNAKFIMNYISRISGGGQ 132
                                                                                                                        RGGAVRDRLLQSNPVLEAFGNAKTLRNDNSSRFGKYMDVQFDFKGAPVGGHILSYLLEKS
                                                                                                                                                                                                                                                                                  VGVDDMVLLPKLT-EQSIVENLKKRLQANSIFTYIGPVLISVNPFKQMPYFTEKEMLLYQ
                                                                                                                                                                                                                                                                                                                                                                                           al Similarity 367; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LISVNGEHS---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TLKGGKTCVVKFIRDPQGGDGKVKGTKVS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (JUL-1996) to the EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1100 AA;
                                                                                                                                                                                                                                                                                                                                                                                         Conservative 172;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PubMed=9851916;
                                                                                                                                                                                                                                                                                                                                                                                                               29.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       myosin_head
SH3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   124885 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SHprot_acsite
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Nematoda;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   IQ_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              01,
01,
21,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -NLLECRRKTELIGVLLKHNPSVRIQFADTFN-----V 874
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           oda; Chromadorea;
Caenorhabditis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Created)
Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                    Pred. No. 5.7e
2; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                          Score 1564; DB 5;
Pred. No. 5.7e-99;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2CDB6F02EDEEDED9 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1022
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          903
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A
                                                                                                                                                                                                                                                                                                                                                                                    320;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Rhabditida; Rhabditoidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        databases.
                                                                                                                                                                                                                                                                                                                                                                                                                              Length 1100;
                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SADRVNNININGGSI 1004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       for
                                                                                                                                                                                                                                                                                                                                                                                    200;
                                                                                                                                                                                                                                                                                                                                                                               Gaps
  251
                                                                                                                                         206
                                                                                                                                                                                                                                                                                       72
                                                                                                                                                                                                                                                                                                                                                                                 21;
```

Db	Qy	Db	Qy	Db	Qy	Db	Qy	Db	Qy	DЬ	Qy	DЬ	Qy	Db	Qy	рь	Qy	Db	Qy	ф	Qy	Db	Qy	рь	Qy	Дb	2
887	1005	837	963	777	916	720	858	711	798	711	738	656	678	596	618	536	559	488	499	428	443	371	383	311	327	252	197
DFSDGKRTVQFGNDGTSSAEKTLKPNGKVLNVS 919	IDFTSGSELLITKAKNGHLAVVA	GNDDYSSLLETPFKTEFCTALSKAYKERTNGTLHLDFRSSHVVSYKKMKF 886	QREDNKQKGDVVLQSDHVIETLTKTALSADRVNNININQGSI 1004	VTKLDLLLTVNHLTLIGKEKVKNGPEKGKIVEVIKRQFDLPQIKSIGLSPYQDDFVILYL 836	PRPRQLLLTPSAVVIVEDAKVKQRIDYANLTGISVSSLSDSLEVLHV 962	AADLMYGKKERRRYSLNRNFVGDYIGLEHHPTLQSLVGKRQRVLFACTANKYDRK-FR 776	ASEIFKGKKDNYPQSVPRLFISTRLGTEEISPRVLQSLGSEPIQYAVPVVKYDRKGYK 915		LLNLRRQLPRNVLDTSWPTPPPALREASELLRELCMKNMVWKYCRSISPEWKQQLQQKAV 857	710	VKRSAICIQSWWRGTLGRRKAAKRKWAAQTIRRLIRGFILRHSPRCPENAFFLDHVRASF 797	ICDSVHMEKNQYQMGKTKIFVKNPESLFLLEETRERKFDGYARVIQKAWRQFSAR 710	푀	WEESRVKHQVEYLGLRENIRVRRAGFAYRRAFDKFAQRYAIVSPQTWPCFQGDQQRACEI 655	FDEVLIRHQVKYLGLMENLRVRRAGFAYRRKYEAFLQRYKSLCPETWPMWAGRPQDGVAV 677	SRPFIQALFPENVAASAGKRPTTFSTKIRTQANTLVESLMKCSPHYVRCIKPNETKRPND 595	MNPIMAQCFDKS-ELSDKKRPETVATQFKMSLLQLVEILRSKEPAYIRCIKPNDAKQPGR 617	AGHPHEGPGSDSFVIKHYAGDVTYNVDGFCDRNRDVLYPDLILLMQKS 535	GFLDKN	VREGIKWTEIDYEDNKIVCDLIETKRPPGIMSLLDDTCAQNHGQREGVDRQLLTTLSKSF 487	EEKF-K	NITSQSTSDNFSVGILDIYGFEIFNNNGFEQFCINFVNEKLQQIFIELTLKAEQEEY 427	ASKDAESPSWRSTTVLGLLDIYGFEVFQHNSFEQFCINYCNEKLQQLFIELTLKSEQEEY 442	SADIEAKLTGRKMESKWGTQKEEIDMKLNVEQASYTRDAWVKAIYARLEDYLVKKVNDAM 370	ARDALAKAVYSRTFT	STLHAMKVVGVNDQDQLEVLRIVATVLHIGNITF-TEENNFAAVSGKDYLEYPAFLLGLT 310	VMRKALSVIDFTEDEVEDLISIVASVLHLGNIHFAADEDSNAQVTTENQLKYLTRLLGVE 326

Search completed: December 9, 2002, 16:46:44 Job time : 89 secs

